WEST VIRGINIA UNIVERSITY

CATALOGUE
1908 - - 1909

ANNOUNCEMENTS
1909 - - - 1910

THE COLLEGES

MORGANTOWN, WEST VIRGINIA
PUBLISHED BY THE UNIVERSITY

154
052
08-09

WHEELING NEWS LITHO. CO., WHEELING.

CONTENTS

Calendar 4
Board of Regents 6
Officers of Instruction and Administration 7
Historical Sketch of the University 19
Description of the institution 25
University fees and expenses 29
Accredited and recognized schools 30
Admission, registration and scholarship 33
General information 38
College of Arts and Sciences 45
College of Engineering and Mechanic Arts 107
College of Agriculture 148
College of Law 166
College of Medicine 181
Department of Military Science and Tactics 191
Degrees, diplomas and prizes 200
Alumni associations 204
List of students 205
Summary of enrollment 222
Index 223

CALENDAR

1909

JULY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

OCTOBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

NOVEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1910

JANUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1910

JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

UNIVERSITY CALENDAR

1909

September 20, Monday.....Fall Quarter Begins
September 20, 21, 22, Monday, Tuesday, and Wednesday.....
.....Entrance Examinations
September 20, 21, 22, Monday, Tuesday, and Wednesday.....
.....Matriculation and Registration of Students
September 22, Wednesday, 8:30 P. M.....Fall Convocation
September 23, Thursday.....Recitations of Fall Quarter Begin
November 25 to November 28.....Thanksgiving Recess
December 14, Tuesday.....Last Recitations of Fall Quarter
December 15, Wednesday, to December 17, Friday, inclusive....
.....Final Examinations of Fall Quarter
December 18, Saturday, to January 3, 1910.....Quarterly Recess

1910

January 4, Tuesday (Registration Day).....Winter Quarter Begins
January 4, Tuesday, 8 P. M.....Winter Convocation
January 5, Wednesday.....Recitations of Winter Quarter Begin
February 22, Tuesday.....Washington's Birthday, a Holiday
March 22, Tuesday.....Last Recitations of Winter Quarter
March 23, Wednesday, to March 25, Friday.....
.....Final Examinations of Winter Quarter
March 25, Friday.....Winter Quarter Ends
March 26, Saturday, to March 28, Monday.....Quarterly Recess
March 29, Tuesday (Registration Day).....Spring Quarter Begins
March 29, Tuesday, 8 P. M.....Spring Convocation
March 30, Wednesday.....Recitations of Spring Quarter Begin
May 30, Monday.....Memorial Day, a Holiday
June 7, Tuesday.....Last Recitations of Spring Quarter
June 8, Wednesday, to June 11, Saturday, inclusive.....
.....Final Examinations of Spring Quarter
June 15, Wednesday.....Commencement

BOARD OF REGENTS

For the Term Beginning May 19, 1905

C. E. HAWORTH, Huntington
E. M. GRANT, Morgantown
D. C. GALLAHER, Charleston
T. P. JACOBS, New Martinsville

For the Term Beginning May 19, 1907

F. P. McNELL, Wheeling
C. M. BABB, Falls
J. B. FINLEY, Parkersburg
LUTHER C. ANDERSON, Welch
Z. TAYLOR VINSON, Huntington

OFFICERS OF THE BOARD

C. M. BABB.....President
J. S. STEWART.....Secretary
A. R. WHITEHILL.....Treasurer
T. E. HODGES.....Assistant Treasurer
W. J. WHITE.....Auditor
F. L. EMORY.....Sup't of Buildings and Grounds

OFFICERS OF ADMINISTRATION AND INSTRUCTION

THE OFFICERS OF THE UNIVERSITY

DANIEL BOARDMAN PURINTON, Ph. D., LL. D., President
POWELL BENTON REYNOLDS, D. D., Chaplain
WAITMAN BARBE, Litt. D., Assistant to the President and Field Agent
SUSAN MAXWELL MOORE, Dean of Women
ALFRED JARRETT HARE, A. M., Registrar
ALEXANDER REID WHITEHILL, Ph. D., Treasurer
THOMAS EDWARD HODGES, A. M., Assistant Treasurer
WILLIAM J. WHITE, Auditor
FREDERICK LINCOLN EMORY, M. E., Superintendent of Buildings and Grounds

THE UNIVERSITY COUNCIL

Daniel Boardman Purinton
Harry Anthony Eaton
Alfred Jarrett Hare
Alexander Reid Whitehill
Waitman Barbe
Powell Benton Reynolds
Charles Edgar Hogg
Thomas Clark Atkeson
Frederick Wilson Truscott
Will Hazen Boughton
Robert Allen Armstrong

STANDING COMMITTEES

Classification and Grades

Thomas Edward Hodges
Alfred Jarrett Hare
Jasper Newton Deahl
Clement Ross Jones
James Morton Callahan

Ways and Means

Charles Henry Patterson
William Patrick Willey
John Arndt Eiesland
Frederick Lincoln Emory
Ross Spence

Athletics

Henry Sherwood Green
Thomas Edward Hodges
Anthony Wencel Chez
Harry Anthony Eaton
Dennis Martin Willis

Students' Aid

Russell Love Morris
William Jackson Leonard
Henry Mace Payne
Frederick Lawrence Kortright
Rufus West

Library

Nathaniel Lewis Goodrich
James Morton Callahan
Henry Sherwood Green
Albert Moore Reese
Charles Henry Patterson

Women Students

Grace Martin Snee
Margaret Buchanan
Susan Maxwell Moore
Louise Ferris Chez
Eva Emma Hubbard

Stationery and Printing

John Harrington Cox
Simeon Conant Smith
Oliver Perry Chitwood
Frank Butler Trotter
David Dale Johnson

THE FACULTY

DANIEL BOARDMAN PURINTON, PH.D., LL.D. President's House

President and Professor of Philosophy

A.B., West Virginia University, 1873; A.M., *ibid.*, 1876; Ph.D., University of Nashville, 1892; LL.D., Denison University, 1889. Instructor Preparatory Department of West Virginia University, 1873-8; Professor of Logic, *ibid.*, 1878-81; Professor of Mathematics, *ibid.*, 1881-5; Professor of Metaphysics, *ibid.*, 1885-9; Vice-President and Acting President, *ibid.*, 1881-2; Instructor in Vocal Music, *ibid.*, 1873-89; President, Denison University, 1890-1901; present position since 1901.

JAMES SCOTT STEWART, B.S., M.S. 146 Willey Street

Professor of Mathematics, Emeritus

B.S., West Virginia University, 1877; M.S., *ibid.*, 1880. Assistant in Preparatory School, West Virginia University, 1877-91; Professor of Mathematics, *ibid.*, 1891-3; Superintendent of Schools, Fairmont, West Virginia, 1893-4; Professor of Mathematics, 1894-1907; present position since 1907.

ROBERT WILLIAM DOUTHAT, A.M., PH.D. 203 Fife Avenue

Professor of Latin Language and Literature, Emeritus

A.M., Emory and Henry College, 1874; Ph.D., Roanoke College, 1877. Professor of Languages, Missouri University School of Mines and Metallurgy, 1873-84; President, Collegiate Institute (New Mexico), 1884-7; President, Collegiate Institute (Arkansas), 1887-9; Professor of Languages, Kentucky Military Institute, 1889-90; President, Barboursville College, 1890-5; Professor of Ancient Languages, West Virginia University, 1895-7; Professor of Latin Language and Literature, 1897-1907; present position since 1907.

*ST. GEORGE TUCKER BROOKE, A.M., LL.D. 128 Willey Street

Professor of Common and Statute Law

A.M., West Virginia University, 1889; LL.D., Wake Forest College, 1890; Student, University of Virginia Law School, 1867-9. Member Bar, Charles Town, West Virginia, since 1869; Acting Dean of the College of Law, 1903-5; present position since 1878.

WILLIAM PATRICK WILLEY, A.B., A.M. 250 Pleasants Street

Professor of Equity, Jurisprudence, and Commercial Law

A.B., Dickinson College, 1862; A.M., *ibid.*, 1865. Member Bar, Morgantown, West Virginia, and Baltimore, Maryland, 1866-78; present position since 1883.

POWELL BENTON REYNOLDS, A.M., D.D. 87 Grant Avenue

Chaplain and Professor of Economics and Sociology

A.M., West Virginia University, 1887; D.D., Richmond College, 1890; Student, Richmond College, 1866-70. President, Shelton College, 1872-84; President, Buckner College, 1884-5; Professor of English, West Virginia University, 1885-9; Vice-President and Professor of Metaphysics, *ibid.*, 1889-93; Acting President, *ibid.*, 1893-5; Professor of Metaphysics and Political Science, *ibid.*, 1895-7; Professor of Philosophy, 1897-1901; Acting President, 1901; present position since 1901.

ALEXANDER REID WHITEHILL, A.M., PH.D. 128 Willey Street

Professor of Chemistry

A.B., Princeton University, 1874; A.M., *ibid.*, 1877; Ph.D., Washington and Jefferson College, 1887; Graduate student, University of Leipzig and Freiberg School of Mines, Germany, 1874-5. Professor of Experimental Science, University Mound College, 1876-81; Principal, Linsly Institute, 1881-5; present position since 1885.

---

*On leave of absence until October 1, 1909.

THOMAS CLARK ATKESON, M.S., PH.D. 234 Prospect Street

Dean of the College of Agriculture and Professor of Agriculture

LL.B., Kentucky University, 1874; Ph.B., Central Normal College, 1891; Ph.D., *ibid.*, 1893; M.S., Barboursville College, 1900; Student, Kentucky Agricultural and Mechanical College, 1874-6. Professor of Agriculture, West Virginia University, 1891-3; President, Barboursville College, 1896-7; present position since 1897.

FREDERICK LINCOLN EMORY, M.M.E., M.E. 156 Foundry Street

Professor of Mechanics and Applied Mathematics

B.S., Worcester Polytechnic Institute, 1887; M.M.E., Cornell University, 1896; M.E., Worcester Polytechnic Institute, 1899. Director, Mechanical Department, Washington, D. C., High School, 1887-90; Superintendent, Trades School, Concord Junction, Massachusetts, 1890-1; Professor of Mechanical Engineering and Mechanic Arts, West Virginia University, 1891-3; Director, Indianapolis Industrial Training and Technical High School, 1893-5; present position since 1897.

SAMUEL BOARDMAN BROWN, A.B., A.M. 640 High Street

Professor of Geology and Mineralogy

A.B., West Virginia University, 1883; A.M., *ibid.*, 1886; Graduate student, National Museum, 1884; Harvard University, 1891. Teacher of Language and Mathematics, Martinsburg, West Virginia, 1883-5; Principal, Glenville State Normal School, 1885-90; Assistant in Geology, West Virginia University, 1890-2; present position since 1892.

ROBERT ALLEN ARMSTRONG, A.M., L.H.D. 107 High Street

Professor of English Language and Literature and Head of the Department of English

A.B., West Virginia University, 1886; A.M., *ibid.*, 1889; Graduate student, University of Chicago, 1898; Columbian University, 1900; A.M., Harvard University, 1903; L.H.D., Allegheny College, 1908. Principal, West Liberty State Normal School, 1886-93; Professor of Mathematics, West Virginia University, 1893-4; Professor of English, West Virginia University, 1894-1901; Vice-President, *ibid.*, 1897-9; present position since 1901.

BERT HOLMES HITE, M.S. Peabody Hotel

Professor of Agricultural Chemistry

M.S., West Virginia University, 1890; Graduate student, Johns Hopkins University, 1891-5; Fellow in Chemistry, *ibid.*, 1893-5. Chemist of West Virginia Agricultural Experiment Station since 1895; Professor of Organic Chemistry, West Virginia University, 1895-7; Chief Chemist, West Virginia Geological Survey since 1898; present position since 1897.

THOMAS EDWARD HODGES, A.B., A.M. 466 High Street

Professor of Physics

A.B., West Virginia University, 1881; A.M., *ibid.*, 1884; Graduate student, Cornell University, Summer, 1897. Principal, Morgantown Public Schools, 1881-6; Principal and Instructor in Natural Science and Pedagogy, Marshall College State Normal School, 1886-96; present position since 1896.

ALFRED JARRETT HARE, A.B., A.M. 411 High Street

Professor of the Latin Language and Literature

A.B., West Virginia University, 1889; A.M., *ibid.*, 1902; Graduate student, Harvard University, 1901. Assistant in Latin and Mathematics, Preparatory School, West Virginia University, 1889-96; Preparatory Professor of Ancient Languages and Mathematics, *ibid.*, 1896-8; present position since 1898.

CHARLES HENRY PATTERSON, A.B., A.M. 294 Grand Street

Professor of Rhetoric

A.B., Tufts College, 1887; A.M., *ibid.*, 1893. Assistant Professor of Rhetoric and Elocution, West Virginia University, 1898-9; Professor of Rhetoric and Elocution, 1899-1903; present position since 1903.

FREDERICK WILSON TRUSCOTT, A.M., PH.D. 34 University Driveway

Professor of Germanic Languages and Literature

A.B., Indiana University, 1891; A.M., *ibid.*, 1892; A.M., Harvard University, 1894; Ph.D., *ibid.*, 1896; Graduate student of University of Berlin, 1896-8, 1900-1. Instructor in German, Indiana University, 1891-3; Assistant and Fellow in German, Harvard University, 1893-4; Assistant Professor of Germanic Languages and Literature, West Virginia University, 1897-9; present position since 1899.

HENRY SHERWOOD GREEN, A.B., LL.D. 246 Fife Avenue

Professor of the Greek Language and Literature

A.B., Yale University, 1879; LL.D., Bethany College, 1901. Teacher of Latin and Greek, Hillman Academy, Wilkesbarre, Pennsylvania, 1879-1881; Principal, *ibid.*, 1881-6; Teacher in Preparatory School, Richmond, Kentucky, 1889-92; Acting Professor of Greek, Central University, Richmond, Kentucky, 1892-3; Principal of Harrodsburg Academy, Harrodsburg, Kentucky, 1893-6; Professor of the Greek Language and Literature, Bethany College, Bethany, West Virginia, 1896-1900; Associate Professor of the Greek Language and Literature, West Virginia University, 1900-1; present position since 1901.

CLEMENT ROSS JONES, B.S.C.E., M.M.E. 262 McLane Avenue

Professor of Mechanical Engineering

B.S.C.E., West Virginia University, 1894; M.M.E., *ibid.*, 1897; M.M.E.. Cornell University, 1900; Special student in shop work, Worcester Polytechnic Institute, Summer, 1893; Special student in Experimental Engineering, Stevens Institute of Technology, Summer, 1897. Associate Principal, West Virginia College, 1894; Assistant in Mechanical Engineering, West Virginia University, 1895-7; Instructor, *ibid.*, 1897-9; Assistant Professor of Mechanical Engineering, 1899-1901; present position since 1901.

WILL HAZEN BOUGHTON, B.S.C.E., C.E. 512 High Street

Professor of Civil Engineering

B.S. (C.E.), University of Michigan, 1893; C.E., *ibid.*, 1898; Graduate student in mathematics, University of Chicago, summer quarters, 1898-9. Assistant Engineer of Maintenance of Way for the Cleveland, Cincinnati, Chicago, and St. Louis Railway; Bridge and Structural Draftsman for the American Bridge Company and the Brown Hoisting Machinery Company; Consulting Engineer for County Court of Monongalia County, West Virginia; Instructor in Mathematics and Civil Engineering, Denison University, 1894-1902; Assistant Professor of Civil Engineering, *ibid.*, 1902-3; present position since 1903.

RUSSELL LOVE MORRIS, B.S.C.E., C.E. 357 Front Street

Professor of Civil Engineering

B.S.C.E., West Virginia University, 1895; C.E., *ibid.*, 1898. Consulting Engineer, State Board of Agriculture; Assistant in Civil and Mining Engineering, West Virginia University, 1895-7; Assistant Professor of Civil and Mining Engineering, 1897-1903; present position since 1903.

JASPER NEWTON DEAHL, A.M., PH.D. 414 Park Street

Professor of Education

A.B., University of Nashville, 1889; A.B., Harvard University, 1893; Higher Diploma, Teachers College, Columbia University, 1899; A.M., Columbia University, 1899; Ph.D., *ibid.*, 1906. Fellow in Education, Teachers College, Columbia University, 1899-1900; Principal, West Liberty State Normal School, 1893-8; Assistant Professor of Education, West Virginia University, 1901-2; Associate Professor of Education, 1902-3; present position since 1903.

JOHN LEWIS SHELDON, A.M., PH.D. 57 Ash Street

Professor of Botany and Bacteriology

B.Pd., B.Sc., Ohio Northern University, 1895; B.Sc., University of Nebraska, 1899; M.Sc., Ohio Northern University, 1899; A.M., University of Nebraska, 1901; Ph.D., *ibid.*, 1903. Instructor in Mathematics, Mount Hermon (Mass.) School, 1892-4; Instructor in Botany, Preparatory School to the State University (Nebraska), 1898-9; Acting Head of the Department of Biology, Nebraska State Normal School, 1899-1900; Instructor in Botany, University of Nebraska, 1900-3; Fellow in Botany, *ibid.*, 1900-3; Professor of Bacteriology and Bacteriologist of the West Virginia Agricultural Experiment Station, 1903-7; present position since 1907.

SUSAN MAXWELL MOORE Willey Street

Dean of Women

Student in Peabody Institute, Baltimore, Maryland, 1878-9; Student in New England Conservatory, Boston, Massachusetts (Piano, Carl Faelten, Organ, George E. Whiting), 1885-7; Teacher of Piano, Mount Holyoke College, Massachusetts, 1887-91; Student in Berlin (Piano, Oscar Raif), 1891-2; Teacher of Piano, Conservatory of Music, Ottumwa, Iowa, 1892-3; Head of Piano Department, Shepardson College and Denison University, Granville, Ohio, 1893-1903; Summer Course under Carl Faelten, Boston, Massachusetts, 1898; Faelten Piano School, Summer, 1901; present position since 1903.

JAMES MORTON CALLAHAN, A.M., PH.D. 93 Logan Avenue

Professor of History and Political Science

A.B., University of Indiana, 1894; A.M., *ibid.*, 1895; Ph.D., Johns Hopkins University, 1897; Graduate student, Chicago University, 1894, Harvard, 1896, and Johns Hopkins, 1894-7. Assistant and Fellow, Johns Hopkins University, 1895-7; Acting Professor of American History and Constitutional Law, Hamilton College, 1897-8; Lecturer on Diplomatic History and International Relations, Johns Hopkins University, 1898-1901; Director, Bureau Historical Research, Washington, D. C., 1900-2; Associate Professor, West Virginia University, 1902-3; present position since 1903.

ANTHONY WENCEL CHEZ, A.B. 748 North Front Street

Director of Physical Training

Graduate, Chautauqua School of Physical Education, 1902; Graduate, Harvard School of Physical Training, 1903; A.B., West Virginia University, 1907. Graduate Coach, Oberlin College, 1899; Director of Gymnasium and Athletic Coach, Wabash College, 1900-1; Professor of Physical Training and Athletic Coach, De Pauw University, 1901-2; Director of Physical Culture and Athletic Coach, University of Cincinnati, 1902-4; Assistant, Harvard Summer School of Physical Training, 1905; present position since 1904.

JOHN NATHAN SIMPSON, A.B., M.D. 293 High Street

Professor of Anatomy and Physiology and Head of the Medical Faculty at Morgantown

A.B., University of Nashville, 1893; M.D., Johns Hopkins University, 1902. First Assistant in Marshall College, 1893-7; Instructor in Anatomy and Physiology, West Virginia University, 1902-3; Associate Professor, 1903-4; present position since 1904.

JOHN HARRINGTON COX, PH.B., A.M. 188 Spruce Street

Professor of English Philology

Graduate, Illinois State Normal University, 1891; Ph.B., Brown University, 1897; A.M., Harvard University, 1900. Educational Director, Twenty-Third Street Branch, Young Men's Christian Association, New York City, 1897-9; Graduate student, Harvard University, 1899-1901; Professor of the English Language and Literature, University of North Dakota, 1901-2; Instructor in English Philology, West Virginia University, 1902-3; Associate Professor of English Philology, 1903-4; present position since 1904.

CHARLES EDGAR HOGG, LL.D. 498 Grand Street

Dean of the College of Law and Professor of Constitutional and International Law

LL.D., Temple University, 1907; present position since 1906.

FREDERICK LAWRENCE KORTRIGHT, B.S., D.Sc.

234 Jackson Avenue

Professor of Chemistry

B.S., Cornell University, 1890; D.Sc., *ibid.*, 1895; Graduate student, Polytechnicum, Switzerland, 1899-1900, and Technische Hochschule, Carlsrube, Germany, 1900. Assistant in Chemistry, Cornell University, 1890-1; Chemist, Solvy Process Company, 1891-2; Assistant in Chemistry, Cornell University, 1892-3; Instructor in Chemistry, *ibid.*, 1893-9; Assistant Professor of Chemistry, West Virginia University, 1900-2; Associate Professor of Chemistry, *ibid.*, 1902-7; present position since 1907.

FRANK BUTLER TROTTER, A.B., A.M. 502 High Street

Professor of Latin

A.B., Roanoke College, 1890; A.M., *ibid.*, 1895; Graduate student, Harvard University, 1891-2. Professor in West Virginia Wesleyan College, 1890-1907, and Vice-President, *ibid.*, 1894-1907; present position since 1907.

HARRY ANTHONY EATON, A.B., LL.B. 299 Grand Street

Captain U. S. Army, Professor of Military Science and Tactics and Commandant of Cadets

A.B., West Virginia University, 1897; LL.B., *ibid.*, 1898. Sergeant Major 1st West Virginia Volunteers, May 14 to 22, 1898; 1st Lieutenant 1st West Virginia Volunteers to July 21, 1898; 2nd Lieutenant 8th United States Infantry, July 22, 1898; Served in that regiment until promoted Captain, August 22, 1903, and assigned to 23rd United States Infantry; present position since 1907.

JOHN ARNDT EIESLAND, PH.B., PH.D. 23 Demain Street

Professor of Mathematics

Ph.B., University of South Dakota, 1891; Graduate student, Johns Hopkins University, 1892-8; Ph.D., Johns Hopkins University, 1898. Taught in public schools of Norway; Teacher in Luther Academy, Minnesota, 1891-2; Professor of Mathematics in Thiel College, Greenville, Pennsylvania, 1895-1903; Instructor in Mathematics in United States Naval Academy, 1903-7; present position since 1907.

JUSTIN FRANK GRANT, PH.B., M.D. 258 McLane Avenue

Professor of Anatomy and Pathology

Ph.B., Yale University, 1898; M.D., Johns Hopkins University, 1903. Resident Physician and Surgeon, Hahnemann Hospital, Rochester, New York, 1900-1; Instructor in Anatomy, West Virginia University, 1903-4; Assistant Professor of Anatomy, West Virginia University, 1904-5; Assistant Professor of Anatomy and Pathology, *ibid.*, 1906-7; present position since 1907.

HENRY MACE PAYNE, PH.D., Sc.D. Peabody Annex

Professor of Mining Engineering

C.E., Arkansas Normal College, 1900; Ph.D., *ibid.*, 1900; Sc.D., Shenandoah Normal College, 1901; Student in McGill University, 1885-8. Vice-Principal, Milton Academy, Baltimore, Maryland, 1896; President and Professor of Engineering and Mathematics, Stewartstown Collegiate Institute, Pennsylvania, 1897-1901; Assistant Engineer, Baltimore and Ohio Railroad, 1902; Resident Engineer, Norfolk and Western Railway, 1903-4; Consulting Engineer (private practice), Williamson, West Virginia, 1904-6; General Superintendent and Chief Engineer of the Mingo Block Coal Company, 1906-8; Consulting Engineer for the Fairmont Coal Company, the Beattyville Block Coal Company, and the Richardson Coal Company; present position since 1907.

ALBERT MOORE REESE, A.B., PH.D. 480 High Street

Professor of Zoology

A.B., Johns Hopkins University, 1892; Ph.D., *ibid.*, 1900. Lecturer in Chemistry, Southern Homeopathic Medical College, 1892-6; Lecturer in Histology and Embryology, Pennsylvania College, 1896; Professor of Biology and Geology, Allegheny College, 1901-2; Instructor in Histology and Embryology, Syracuse University, 1902-3; Associate Professor of Histology and Embryology, *ibid.*, 1903-7; present position since 1907.

OLIVER PERRY CHITWOOD, A.B., PH.D. 480 High Street

Professor of European History

A.B., William and Mary College, 1899; Ph.D., Johns Hopkins University, 1905. Librarian of William and Mary College, 1898-9; Headmaster, Richmond Academy, 1902-3; Fellow in History, Johns Hopkins University, 1904-5; Professor of History and Political Economy, Mercer University, 1905-7; present position since 1907.

C. EDMUND NEIL, A.B., A.M. 131 Fayette Street

Professor of Elocution and Oratory

A.B., McKendree University, 1895; A.B., Ohio Wesleyan University, 1897; Private pupil of Leland T. Powers, 1895-8 (Summers); A.M., Ohio Wesleyan University, 1908. Instructor in Elocution, Ohio Wesleyan University, 1895-6; Assistant Professor of Oratory, Ohio Wesleyan School of Oratory, 1896-7; Professor of Elocution, Denison University, 1897-8; Professor of Oratory and Elocution, Denison University, 1901-3; Assistant Professor of Elocution, West Virginia University, 1903-4; Associate Professor of Elocution and Oratory, West Virginia University, 1904-8; present position since 1908.

JAMES RUSSELL TROTTER, LL.B., PH.D. 15 Demain Avenue

Professor of Law

A.B., West Virginia University, 1891; A.B., Harvard University, 1895; A.M., *ibid.*, 1896; LL.B. and Ph.D., West Virginia University, 1902. Instructor in West Virginia Conference Seminary, 1891-2; Principal, Clarksburg High School, 1892-4; State Superintendent of Free Schools of West Virginia, 1897-1901; present position since 1908.

*WAITMAN BARBE, A.M., LITT.D. Peabody Hotel

Assistant to the President and Associate Professor of the English Language and Literature

B.S., West Virginia University, 1884; M.S., *ibid.*, 1887; A.M., 1897; Litt.D., Denison University, 1904; Graduate student, Harvard University, 1901; Graduate student at Oxford University, England, 1908-9. Field Agent, West Virginia University, 1895-8; present position since 1898.

WILLIAM JACKSON LEONARD 36 University Driveway

Associate Professor of Fine Arts

Student, The Cowles Art School, Boston, 1889-90; Pupil of Jean Paul Laurens and Benjamin Constant, Paris, 1891-3; Student, Academie Julien and Ecole des Beaux Arts, Paris; Special student, Harvard University. Instructor in Fine Arts, West Virginia University, 1900-2; present position since 1902.

EDWIN FAYETTE CHURCH, JR., B.S., M.S. 336 Park Street

Associate Professor of Mechanical Engineering

B.S., Massachusetts Institute of Technology, 1901; M.S., *ibid.*, 1908. Draftsman and Assistant to Chief Engineer, William Cramp and Sons, Philadelphia, 1901-3; Draftsman, I. P. Morris Company, Philadelphia, 1903; Instructor in Marine and Mechanical Engineering and Naval Architecture, Lehigh University, 1903-4; Assistant Professor of Mechanical Engineering, West Virginia University, 1904-6; present position since 1906.

*On leave of absence until April 1, 1909.

WILLIAM ELMORE DICKINSON, A.B., M.E.-E.E. 334 Park Street

Associate Professor of Electrical Engineering

L.I., College of William and Mary, 1895; A.B., *ibid.*, 1901; M.E.-E.E., Cornell University, 1904; Student apprentice, Stanley Electrical Manufacturing Company, Pittsfield, Massachusetts, 1903. Member of Testing Corps, Electric Railway Test Commission, Louisiana Purchase Exposition, 1904; Assistant Engineer, Westinghouse, Church, Kerr, and Company, New York, 1904-5; Instructor in Electrical Engineering, West Virginia University, 1905-6; Assistant Professor of Electrical Engineering, *ibid.*, 1906-7; present position since 1907.

DANIEL WEBSTER WORKING, B.S., A.M. 20 Willey Driveway

Superintendent of Agricultural Extension Work

B.S., Kansas State Agricultural College, 1888; A.M., University of Denver, 1907; Attended Graduate School of Agriculture, Cornell University, Summer of 1908. Editor, Colorado Farm and Live Stock Journal, 1889-91; Secretary, Colorado State Board of Agriculture, Agricultural College, and Agricultural Experiment Station, 1893-7; Editor, Irrigation Review, 1897-8; County Superintendent of Schools, Arapahoe County, Colorado, 1905-7; present position since 1907.

CHARLES COLLIER HOLDEN, A.B. 480 High Street

Assistant Professor of Romance Languages

Student of University of Virginia, 1877-81; Studied in Europe, 1881-3; A.B., (extra ordinem), Johns Hopkins University, 1888; Graduate student, *ibid.*, 1896-8. Instructor in Modern Languages, Maupin's University School, Ellicott City, Maryland, 1885-8; Principal of Elkton Academy, Maryland, 1896-9; Instructor in Modern Languages, Boys' University School of Baltimore, 1899-1900; Assistant in Romance Languages, West Virginia University, 1901-3; Instructor in Romance Languages, 1903-6; present position since 1906.

SIMEON CONANT SMITH, A.B., A.M. 107 High Street

Assistant Professor of Rhetoric

A.B., Tufts College, 1898; A.M., West Virginia University, 1902; Graduate student, Harvard University, 1903-4. Fellow in Rhetoric and Elocution, West Virginia University, 1899-1900; Instructor in Rhetoric and Assistant in English in the Preparatory School, 1900-6; present position since 1906.

MADISON STATHERS, A.B., PH.D. 222 Pleasant Street

Assistant Professor of Romance Languages

Graduate, West Virginia Conference Seminary, 1899; A.B., West Virginia University, 1901; Graduate student in Paris, Summer of 1904; Ph.D., University of Grenoble, France, 1905; Studied in Spain, Summer of 1905. Principal of Preparatory Department and Assistant in Latin, West Virginia Conference Seminary, 1902-3; Professor of Romance Languages and Literature, West Virginia Wesleyan College, 1903-6; Instructor in Romance Languages, West Virginia University, 1906-7; present position since 1907.

ARETAS WILBUR NOLAN, A.B. 203 Allen Avenue

Assistant Professor of Horticulture, Forestry, and Economic Entomology

A.B., Indiana University, 1905; Graduate student, Winona Biological Station, 1906; Graduate student, Columbia University, 1907. Institute Lecturer in Nature Study and Forestry, LaGrange, Indiana; Principal and Instructor in Biology, High School, Cayuga, Indiana, 1900-3; Superintendent and Instructor in Biology, City Schools, Lima, Indiana, 1903-8; present position since 1908.

GEORGE PERRY GRIMSLEY, A.M., PH.D. 164 Front Street

Special Lecturer in Economic Geology

A.B., Ohio State University, 1890; A.M., *ibid.*, 1891; Ph.D., Johns Hopkins University, 1894. Assistant Geologist, Ohio Geological Survey, 1890-2; Assistant Geologist, Kansas Geological Survey, 1896-1901; Assistant Geologist, Michigan Geological Survey, 1901; Professor of Geology and Natural History, Washburn College, Topeka, Kansas, 1895-1904; Geologist, Kansas State Board of Agriculture, 1896-1904; Assistant State Geologist, West Virginia Geological Survey, 1904; present position since 1905.

ROSS SPENCE Peabody Annex

Instructor in Music

Graduate, University School of Music, Ann Arbor, Michigan, 1897; Pupil of Emanuel Wirth, Berlin, 1897-1900. Member, Boston Festival Orchestra, 1901; Instructor on Stringed Instruments, West Virginia University, 1901-4; Director of the University School of Music since 1904.

WILLIAM MICHAEL BAUMGARTNER, A.B. 305 Willey Street

Instructor in German

A.B., West Virginia University, 1903. Student in Berlin, Summer, 1905. Instructor in German and French, Keyser Preparatory Branch of the West Virginia University, 1903-5; present position since 1905.

FREDERICK RANDOM WHIPPLE, M.D.V. 100 Beverly Avenue

Instructor in Veterinary Science

M.D.V., McKilip Veterinary College, 1902. Assistant in the Department of Pharmacology, *ibid.*, 1902-7; present position since 1907.

CLARENCE POST, A.B. 45 Stewart Street

Instructor in Physics

A.B., West Virginia University, 1907; Graduate student, Cornell University, Summer of 1907. Present position since 1907.

CHARLES AUGUSTUS LUEDER, D.V.M. 748 North Front Street

Instructor in Dairying

D.V.M., Cornell University, 1902; Graduate student, Cornell University, 1903. Present position since 1908.

CHARLES J. HOGG 498 Grant Street

Instructor in Law

CHARLES WALKER SPRINGER, V.M.D.

Instructor in Veterinary Science

V.M.D., University of Pennsylvania, 1905. Member of American Veterinary Medical Association, and of the Veterinary Medical Society of the University of Pennsylvania. Present position since 1908.

MABEL CONSTANCE FOSTER 271 Grand Street

Assistant in Music

Student in Conservatory of Music, Philadelphia, 1891-2; Pupil of Von Westernhagen, Philadelphia, 1893; Pupil of Elisa Mazzucato Young in Harmony, 1897-1901; Student in Sherwood School of Music, 1901-2; present position since 1902.

LOUISE FERRIS CHEZ — 748 North Front Street

Assistant Director of Physical Training, in charge of the Women's Gymnasium

Graduate, Chautauqua School of Physical Education, 1902; Graduate work in Massage and Swedish System. Assistant to Jakob Bolin of New York City in Clinic of Corrective and Orthopedic Gymnastics, 1903; Director of Physical Training for Women, DePauw University, 1901-2; Director of Physical Culture for Women, University of Cincinnati, 1903-4; present position since 1904.

RUFUS ASA WEST — 181 First Street

Assistant in Metal Working and Stationary Engineer

Apprentice, Fairchild, Lawhead and Company, Carriage Builders, 1887-90; Blacksmith, Tygart Mfg. Co., 1890-2; Special student, Springs Garden Institute, Summer, 1897; Head Stationary Engineer, National Export Exposition at Philadelphia, Fall, 1899; present position since 1892.

THOMAS HOWARD CATHER — 394 Willey Street

Foreman of the Machine Shop

Apprentice, Baltimore and Ohio Railroad, Grafton, West Virginia, 1887-91; Machinist, Burlington Railroad in Missouri, and Union Pacific Railroad, 1891-3; Chicago, Rock Island, and Pacific Railroad, Horton, Kansas, 1893-5; Cotton Belt Railroad, Pine Bluff, Arkansas, 1895-7; Navy Yard, Washington, D. C., 1898; Foreman, Baltimore and Ohio Erecting Shop, Grafton, West Virginia, 1899-1902; present position since 1902.

JOHN BEHNY GRUMBEIN — 491 Front Street

Foreman of the Wood Shop

Apprentice, Orr, Painter and Company, Reading, Pennsylvania, 1895-8; Pattern Maker, Harrisburg Foundry and Machine Company, 1898-9; Robert Wetherel and Company, Chester, Pennsylvania, 1899; Ingersoll-Sergeant Drill Company, Easton, Pennsylvania, 1899-1900; Foreman of Pattern Shop, Blaisdell Machinery Company, Bradford, Pennsylvania, 1900-3; present position since 1903.

URIAH BARNES, LL.B. — 28 Wilson Avenue

Assistant in Law

LL.B., Illinois College of Law, 1907.

LIBRARY STAFF

NATHANIEL LEWIS GOODRICH, A.B., B.L.S. — 61 Beverly Avenue

Librarian

A.B., Amherst College, 1901; B.L.S., New York State Library School, 1904. Sub-librarian in Charge of Accession, *ibid.*, 1904-7; present position since 1907.

JESSICA GARDINER CONE — 120 High Street

Assistant Librarian and Cataloguer

Vassar College, 1879-80; New York State Library School Diploma, 1897; Library Organizer and Cataloguer, 1897-1904; present position since 1904.

DORA MOORE, PH.B. — 324 Willey Street

Assistant Librarian

Ph.B., Denison University, 1903; Student in Summer School, West Virginia University, 1905; Course in Library Science, New York State Library School, 1906-7. Present position since 1907.

KATHERINE CLIFTON HEDRICK — Woman's Hall

Assistant in Law Library

Private Secretary to President of West Virginia Supreme Court of Appeals, 1896-1901; Reporter of Supreme Court Decisions for the Law Journal of West Virginia Bar Association, 1897-1901; present position since 1903.

LILLIAN SMITH — 205 Gordon Street

Assistant

BENJAMIN WALTER KING — 571 Spruce Street

Secretary and Acting Assistant to the President

Assistant Secretary to the President, 1906-8; present position since 1908.

THE UNIVERSITY

HISTORICAL SKETCH

FOUNDATION

West Virginia University originated from the national land grant act of July 2, 1862, and the subsequent action of the state legislature in accepting and carrying out the provisions of the act, and from the foundations of an educational institution which had already been laid at Morgantown for half a century.

The act of 1862 granted lands or land script to each state (in proportion to the number of its senators and representatives in Congress). The proceeds of the sale of these lands were to be invested in safe stocks yielding not less than five per cent upon the par value of the stocks, and this interest "inviolably appropriated, by each state which may take and claim the benefit of this Act, to the endowment, support and maintenance of at least one college where the leading objects shall be, without excluding other classical and scientific studies, and including military tactics, to teach such branches of learning as are related to agriculture and mechanic arts in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

On October 3, 1863, the West Virginia legislature, empowered by the constitution to foster education and organize institutions of learning in the interest of the people of the state, accepted the conditions of the act of Congress and appropriated $500.00 to defray the expenses of procuring and selling the land script and of investing the proceeds. Congress by act of April 14, 1864, extended the preceding act to West Virginia, and the latter received land script for 150,000 acres. By joint resolution of January 24, 1867, the legislature submitted to Congress strong reasons for an additional appropriation, but the appeal was without success.

Steps were soon taken to select a location for the college. Among the towns which made substantial offers to secure it was Morgantown, which was already the seat of Monongalia Academy (incor-

porated by the Virginia legislature November 29, 1814), Morgantown Female Seminary (established 1831 and incorporated 1839), and Woodburn Female Seminary (incorporated January 4, 1858). On January 9, 1866, the board of trustees of the Monongalia Academy tendered to the legislature, for the use of the college, all its property, including Woodburn Female Seminary, estimated at $51,000, on condition that the college should be located at Morgantown. On January 30, 1867, the legislature accepted the property, and on February 7 passed an act permanently establishing the "Agricultural College of West Virginia," and authorizing the governor to appoint eleven suitable persons, one from each senatorial district, to constitute a board of visitors. The powers and duties of the board were clearly defined by the act and were largely the same as the subsequent powers and duties of the regents, except that the board was a close corporation filling vacancies produced by death of members, and each year electing two new members to fill the places made vacant by lot.

The eleven visitors were soon appointed and on April 3, 1867, held their first meeting at Woodburn Seminary. After the selection of Alexander Martin as president, they proceeded to discuss what style and character the college should assume—whether it should be for the exclusive purpose of training farmers and soldiers, or whether it should offer instruction in all the subjects that were generally understood to belong to the curriculum of a "college," comprising every essential department of education from the foundation upwards. They decided upon the latter. In addition to the preparatory department, in the academy building, they established "three distinct and separate departments of instruction in the college building": (1) collegiate; (2) scientific; (3) agricultural. They also provided for instruction in military tactics. They intended to establish primarily a college that would meet the needs of general education in West Virginia and that would eventually, by expansion, "be able to educate liberally young men in all the professions and pursuits of life."

By an act of March 3, 1868, the legislature appropriated $6,000 for the general use of the college, to be spent as the board might direct, and $10,000 to supplement the permanent endowment. A subsequent act (June 25, 1868), in order to provide better facilities, authorized the sale of Monongalia Academy and dwelling, and the application of the proceeds to the construction of another building on the main college grounds. In the following July the Academy building and grounds were sold to the board of education of Morgantown. Soon thereafter, in the presence of a large assemblage, the corner stone of Martin hall was laid.

GOVERNMENT

By the act of December 4, 1868, which changed the name of the college to "West Virginia University," the name of the "board of visitors" was changed to the "board of regents," with duties and powers defined practically as at present, and provision was made that vacancies in the board should be filled by the governor. On April 12, 1873, an act amending the school law contained a provision that the board of regents should consist of one person from each of the nine judicial circuits, to be appointed by the "board of the school fund;" but by an act of February 17, 1877, the power of appointment was conferred upon the governor with the advice and consent of the senate.

By act of March 2, 1877, it was provided that the board should consist of one person from each senatorial district, to be appointed by the governor as provided by law; and that the board should be changed regularly by the retirement of two members each year after June 30, 1877. Vacancies on the board were to be filled by the governor as before. From 1877 to 1882, under this law there were twelve regents. From 1883 to June 1, 1895, there were thirteen.

The first bi-partizan board was created by the legislature of 1895 and began its term on June 1 of that year. Its members were divided into three groups, one of which was replaced every second year.

The act of 1901, still in force, provides for the appointment of a new board of nine members, "who shall be residents and voters of the state," and "who shall be divided into two classes consisting of four and five regents respectively." The term of office of the first class continued for two years, and the term of the second class for four years; and thereafter, the term of office of each class was to be four years (and until their successors are appointed and qualified). It was also provided that not more than six regents should be of the same political party and that "not more than one shall be appointed from the same senatorial district or county."

From 1867 to 1896 there was a standing executive committee which assisted in the administration of the University and reported to the board. Until 1886 its membership was local and did not include the president, except from 1868 to 1873. After 1886 its members were also members of the board of regents, except in 1894-5, when the secretary of the committee was a professor in the University. The number of members varied, starting with five, increasing to nine and finally decreasing to three.

The administrative offices created at the time of the establishment of the University were those of the president, the vice president, the principal of the preparatory school, and the superintendent

of buildings and grounds. The office of vice president was abolished in 1899. In 1897 the office of assistant to the president was established. Waitman Barbe was elected to the place and still fills it.

The University has had seven regular presidents. Alexander Martin resigned in 1875. He was succeeded by John W. Scott (acting president), 1875-7; John Rhey Thompson, 1877-81; Daniel Boardman Purinton (acting president), 1881-2; William L. Wilson, 1882-3; Robert C. Berkeley (chairman of the faculty), 1883-5; Eli Marsh Turner, 1885-93; Powell Benton Reynolds (acting president), 1893-5; James L. Goodnight, 1895-7; Jerome Hall Raymond, 1897-1901. On the resignation of President Raymond, Daniel Boardman Purinton was called from Denison University to fill the vacancy. He is the first president selected from the alumni of the institution.

The powers and responsibilities of the president have been greatly increased within recent years. The administrative duties, at first shared by the faculty or the local committee, and from 1899 to 1901 by twenty three or more efficient but inharmonious committees, have been wisely and satisfactorily unified and placed under the control of the president. Since December 1, 1901, he has acted with the aid of an assistant, a council of advisors, several standing committees, heads of departments, a registrar, a treasurer, and an auditor.

As the college expanded from local and traditional conditions the strict rules and discipline of the earlier years became unnecessary, and a more efficient system of administration and co-operation was gradually developed. The strict curriculum of the earlier years, and the loose separate-school elective system (the Virginia plan) which replaced it in June, 1882, have both given way to a partially elastic system in which, since 1895, the choice of studies by the student is under the oversight and direction of a "class officer," who requires that prescribed courses shall be taken in order, and supervises the selection and arrangement of elective courses.

GROWTH

For many years the growth of the new institution was very slow and uncertain. This was due to many causes. Among these may be enumerated the partially local foundation, the sectional questions which had divided Virginia long before the war, the new sectional jealousies, the post-bellum political questions and partisanship, the lack of a satisfactory system of secondary schools, the divided responsibility and *laissez faire* policy, and the lack of means of communication with Morgantown. Gradually the power and importance of these causes were reduced by changing conditions. Industrial progress

has been a prominent factor in the transformation of the earlier school into a real college.

The University has been greatly aided by the development of better secondary schools. The normal schools have partly solved the problem of suitable preparatory schools for the University. The preparatory school at Montgomery, opened January, 1897, was established by an act of February 16, 1895. Another school was established at Keyser by an act of 1901.

The most remarkable increase in the attendance of the University was coincident with the admission of women. In 1889 women were admitted to the collegiate department In 1895-6 they were admitted to the college of law. In 1897 they were admitted to the preparatory school and to the schools of music and fine arts.

The phenomenal increase of attendance after 1895 was largely due to the work of the newly created office of field agent of the University and to the addition of new departments. It is instructive to trace how the five departments with which the University started in 1867 have increased to more than twenty-five by expansion and differentiation. [See catalogue of 1906-7.] The dates of the establishment of the special colleges and schools now comprised in the University are as follows: the college of law, 1878; the college of engineering, 1887; the agricultural experiment station, 1888; the commercial school, 1895; the college of agriculture, 1897; the school of music, 1897; the school of fine arts, 1897; the college of medicine, 1900.

BUILDINGS

The problem of securing suitable buildings to meet the needs of expansion has been a continuous one. The supply has never exceeded the demand.

Martin Hall was completed in 1870. The first armory building, now the south end of the Experiment Station, begun in 1873, was finished and occupied in 1874. On June 18, 1874, the corner stone of Woodburn Hall was laid on the site of the Woodburn Seminary building, which had burned in February, 1873. The central part was completed by June, 1876, and the upper floor was used as the commencement auditorium until 1890. As the appropriation was exhausted the two wings were not built at that time.

An addition to the Experiment Station was completed by 1889. In the latter part of the same year Commencement Hall was begun on the grounds purchased in June, 1887, and was completed in 1892.

A wing of the old Mechanical Building, which stood near the river, was ready by September, in 1893, and an addition was finished in 1894. Science Hall was finished and equipped in the summer of

1893. In 1894 all the buildings of the University with their equipments had cost over $250,000, but they were not sufficient to meet the growing needs of the new university.

Early in 1898 work was begun on the north wing of Woodburn Hall. It was completed in 1900 and furnished a home for the music school, which had previously occupied rented rooms on Main street. In 1898 the regents purchased seven acres of the Fife land, on which were two small buildings. After the burning of the old Mechanical Building in 1899, Fife Cottage became the temporary home of the mechanical engineering work until the spring of 1902. The Astronomical Observatory was built near the close of 1900. The Armory, the construction of which had been urged as early as 1888, was finished by 1902. Mechanical Hall, designed in 1899 and begun in 1900, was also completed in 1902. The Library was finished in 1902 and opened in 1903. The President's House was built in 1905. The Central Heating Plant was completed in the early part of 1908.

DESCRIPTION OF THE INSTITUTION

LOCATION

Morgantown, the seat of the University, is the county seat of Monongalia county. It is a beautiful town of twelve thousand inhabitants, located on the Monongahela river and the Baltimore and Ohio railroad, 103 miles east of Wheeling, and the same distance south of Pittsburg. It has the modern conveniences of natural gas, waterworks, electric lights, street railways, local and long distance telephones, and is noted for its healthful conditions, physical, social, and moral. There are churches of the following denominations in the town: Presbyterian, Methodist Episcopal, Methodist Protestant, Baptist, Protestant Episcopal, Lutheran, Christian, and Roman Catholic. There are no saloons.

Few institutions of learning have more attractive natural sites. The University grounds border the Monongahela river and afford a most picturesque outlook. The campus comprises about fifty acres. The University has also a farm of about one hundred acres for the use of the Agricultural Experiment Station and the College of Agriculture.

The University organization embraces:—

- The College of Arts and Sciences; including the Department of Military Science
- The College of Engineering and Mechanic Arts
- The College of Agriculture
- The College of Law
- The College of Medicine

The following schools are connected with the University in their management and work but do not confer degrees:—

- The School of Music
- The School of Fine Arts
- The Summer School
- The School of Commerce
- The Preparatory Schools

The West Virginia Agricultural Experiment Station is under the control of the Board of Regents of the University.

FUNDS

The funds for maintaining the University are derived from the following sources: (1) Interest on the land grant endowment of $115,750; (2) the Morrill fund; (3) the Hatch fund; (4) the Adams fund; (5) biennial appropriations by the state legislature; (6) fees and tuition.

BUILDINGS

The buildings are as follows:—

1. Woodburn Hall, a three-story building, containing lecture-rooms and the physiological and zoological laboratories. The third floor of this building is occupied by the University School of Music.

2. Martin Hall, a three-story building, containing lecture-rooms and society halls.

3. Science Hall, a four-story building, containing lecture-rooms, laboratories for the departments of physics, chemistry, and geology, the museum of geology and paleontology, and the President's office.

4. Commencement Hall, a large two-story building, containing a commodious chapel, with 1,500 seats, and the gymnasium.

5. The Agricultural Experiment Station, a two-story building, containing laboratories, lecture-rooms, and offices.

6. The Armory and Drill Hall, for the Department of Military Science.

7. Mechanical Hall, occupied by the College of Engineering and Mechanic Arts.

8. The Library, containing the general library, reading, and seminary rooms.

9. The President's House.

10. The Central Heating Plant.

11. The Woman's Hall, or dormitory, for women students.

12. The Fife Cottages, containing lecture-rooms and the anatomical and botanical laboratories.

Besides these there are the various buildings on the Agricultural Experiment Station Farm.

The first eleven of the buildings mentioned are of brick and stone.

THE UNIVERSITY LIBRARY

The library is open from 8 a. m. to 10 p. m. every week day during the term, except Thanksgiving day, Christmas day, New Year's day, and the Fourth of July. On Sundays, the library is open, for readers, from 2 to 5 p. m. During the summer vacation, it is open on week days from 8 to 11 a. m.

All officers and students and, under special restrictions, persons not connected with the University, have the privilege of drawing books from the library for home use, two volumes being allowed at one time. Direct access is permitted to the shelves in the stack as well as in the reading and reference rooms, and thus students have an opportunity to become acquainted with the literature of the subjects studied, as far as it is represented in the library. The most important books used in connection with the courses of instruction are

kept on reserve shelves in the reference room for more convenient access.

A card catalogue, shelf list, and other bibliographic aids are provided and the librarians are ready at all times to give assistance in research and investigation.

The library contains about 30,000 volumes, including 4,500 government documents. Present appropriations provide for an annual increase of about 1,500 volumes. Two hundred and ten periodicals are received, including publications of societies and scientific journals. Most of the county papers of the state are sent to the reading room.

There is a special library belonging to the College of Law, containing 5,000 volumes, located in Woodburn Hall; and the Willey library, a valuable collection of about 1,500 volumes donated to the University by the heirs of the late Senator W. T. Willey, has been placed in the document room and opened to the public for reference use.

The library of the Agricultural Experiment Station, containing valuable sets of chemical journals and other technical material, may also be consulted by members of the University.

The library building is entirely of stone, fire-proof, and contains ample reading and reference rooms, which are abundantly lighted and well furnished with modern library appliances. The book room is supplied with metal stacks, which hold 20,000 volumes. On the upper floors of the building are rooms for government documents and for class work.

The various libraries connected with the University contain in the aggregate more than 40,000 volumes.

LABORATORIES

There are thirty laboratories connected with the University. Three of the biological laboratories are located in Woodburn Hall, two being devoted to zoology and one to physiology. The botanical and bacteriological laboratories are situated in North Fife Cottage. South Fife Cottage is devoted entirely to the anatomical laboratories. The veterinary laboratory is located in the basement of Martin Hall. The laboratories of the physical sciences are placed in Science Hall. The space for physics and elementary electrical engineering occupies most of the basement and first floor, the two large chemical laboratories the second floor, and the geological laboratory and museum the third. Students also have access to the state geological collection, which at present occupies part of the second floor of the Library.

The College of Agriculture and the Experiment Station have ample laboratory facilities. There are two experimental dairies, one in the basement of Martin Hall, the other, recently completed, at

the Station Farm. The Experiment Station contains, in addition to the pathological laboratory above mentioned, two well equipped chemical laboratories and an entomological laboratory with its accompanying valuable collection of specimens. The greenhouses adjoining the Station afford facilities for the experimental work of the departments of botany and horticulture.

The laboratories of the College of Engineering are all grouped in Mechanical Hall. They consist of the mechanical and steam laboratories connected with the power plant equipment, the electrical laboratory, the testing laboratory, the hydraulic laboratory, the wood-working shop, the machine shop, the sheet-metal and pipe-fitting shop, the forge shop, and the foundry. In addition to these there are two large, well lighted and well equipped drawing rooms, and a blue printing room.

More extended statements as to the extent and equipment of these laboratories, as well as of the studio, and of the schools of music and fine arts will be found in connection with the announcements of the different departments in other parts of this catalogue.

PHYSICAL TRAINING

Gymnasium

For the physical training of students excellent opportunities are offered by the gymnasium. It is furnished with a complete anthropometric equipment, baths, dressing room, lockers, and all kinds of apparatus usually found in modern gymnasiums. In all the work the aim is to develop health, strength and vitality, and such special exercises are prescribed as may be necessary to symmetrical development.

Young women have the same advantages in the gymnasium as young men, certain hours being reserved and regular classes formed for them.

Athletics

The department of athletics, as now organized, is under the supervision of a director, who is assisted by a coach. Football, base-ball, basket-ball, track and tennis teams are organized and trained each season. Two field days are held annually, one in the fall and one in the spring. Indoor meets are held during the winter term for the class championship. The athletic field is provided with a grand-stand, which adds greatly to the enjoyment and profit of athletic sports. All field sports are under the control of the committee on athletics.

UNIVERSITY FEES AND EXPENSES

In the College of Arts and Sciences and in the College of Agriculture tuition is free to West Virginia students. For students not residents of West Virginia the tuition fees are $20.00 per quarter, or $50.00 per year.

In the College of Engineering the tuition fees are $8.00 per quarter, or $20.00 per year, for resident students, and $20.00 per quarter, or $50.00 per year, for non-resident students.

In the College of Law and the College of Medicine the tuition fees are $10.00 per quarter, or $25.00 per year, for resident students, and $20.00 per quarter, or $50.00 per year, for non-resident students.

The matriculation fee is $5.00, payable upon entering the University by all students except cadets and those whose work is exclusively in music or art. This fee is paid but once by each student unless he remains out of the University more than three years.

The contingent fee is $2.00 per quarter, payable at the beginning of the quarter by all students except cadets.

The athletic fee is $2.00 per quarter for the fall and spring quarters and $1.00 for the winter quarter, payable at the beginning of each quarter by all students.

A fee of $2.00 each term is charged for registration and the issuance of class cards. This fee is remitted to all students who procure class cards during the first three days of the fall quarter, the first day of the winter quarter, and the first day of the spring quarter. It is exacted in all other cases. Class officers will issue class cards only on presentation of the ticket from the registrar and the treasurer, and, after the limit of time mentioned, this ticket must bear the treasurer's receipt for this fee. Students whose work is exclusively in music or art, or in both, are excused from payment of the $2.00 registration fee.

The diploma fee is $5.00, payable by all students at the beginning of the quarter in which they expect to receive their degree or diploma.

A tuition fee of $10.00 per quarter is charged all students in the courses of music.

Any student in the School of Music who is not a resident of West Virginia, and who pays at least $16.00 a quarter for music, is permitted to take, in addition to music, one credit course each quarter free of charge, or two credit courses at one-half the usual charges, but in either case such student shall pay the contingent fee of $2.00 a quarter.

A fee of $1.00 is charged for furnishing a copy of a student's record in the registrar's office after the regular quarterly reports have been issued.

Students in laboratory courses pay special fees to cover the cost of materials used.

BOARD AND LODGING

Board and lodging together may be obtained in Morgantown for $3.50 per week. Most students, however, pay from $3.75 to $4.50 per week. Furnished rooms may be obtained in private families at from $1.00 to $1.25 per week. Board in students' clubs costs from $2.50 to $3.00 per week; in private families, from $3.00 to $4.00.

ESTIMATED EXPENSES FOR A YEAR OF NINE MONTHS

Room rent	$ 36.00	to	$ 45.00
Board	100.00	to	120.00
Washing	9.00	to	13.00
Text-books	8.00	to	30.00
Contingent and athletic fees	6.00	to	11.00
	$159.00		$219.00

To this estimate must be added matriculation, tuition, diploma, and laboratory fees, in the case of students who are required to pay them, traveling expenses, clothing, and miscellaneous expenses, which depend largely upon the tastes and habits of individual students.

Text-books are kept for sale in the University book store and are furnished to students at cost.

State cadets are furnished their text-books, stationery, and uniforms free and are exempt from the payment of matriculation, contingent, and athletic fees.

ACCREDITED AND RECOGNIZED PREPARATORY SCHOOLS

The University is a part of the public school system of the state and desires that its relations with the other parts of the system be as close and intimate as possible. The committee on classification and grades has full charge of all matters pertaining to accredited and recognized schools. School superintendents, principals, or boards, desiring to have their schools placed on the accredited or recognized list, should make application to Professor J. N. Deahl, sub-committee on accredited and recognized schools.

Diplomas or certificates of a general nature will not be accepted, but certificates setting forth the work of the student in detail will be required in every case. The University provides a special form for this certificate, copies of which may be obtained at any time upon application to the President of the University or the chairman of the

committee on classification and grades. A supply should be kept on hand by the principal of each accredited or recognized school.

ACCREDITED PREPARATORY SCHOOLS

Accredited schools are those which offer a sufficient amount of work to admit their students to the freshman class in the College of Arts and Sciences*. Eligibility to the list of accredited schools depends on the quantity and quality of the work done. The following provisions concerning the quality of the instruction must be complied with:

1. The scholastic attainments of teachers in accredited schools must be equivalent to that of a graduate of a standard college and should include professional preparation and some special training in the subjects they teach.

2. The number of daily periods of class room instruction given by any one teacher should not exceed five.

3. The faculty should consist of not fewer than three teachers exclusive of the superintendent of schools, except in cases where the number of students does not exceed thirty or forty.

4. Laboratory and library facilities must be adequate to meet the needs of instruction.

The list of accredited schools is as follows:

Allegheny County Academy ..... Cumberland, Md.
Allegheny Collegiate Institute ..... Alderson, W. Va.
Bluefield High School ..... Bluefield, W. Va.
Broaddus Classical and Scientific Institute ..... Clarksburg, W. Va.
Charleston High School ..... Charleston, W. Va.
Clarksburg High School ..... Clarksburg, W. Va.
Connellsville High School ..... Connellsville, Pa.
Elkins High School ..... Elkins, W. Va.
Fairmont High School ..... Fairmont, W. Va.
Grafton High School ..... Grafton, W. Va.
Hinton High School ..... Hinton, W. Va.
Huntington High School ..... Huntington, W. Va.
Linsly Institute ..... Wheeling, W. Va.
Mannington High School ..... Mannington, W. Va.
Martinsburg High School ..... Martinsburg, W. Va.
Morgantown High School ..... Morgantown, W. Va.

*As the requirements for admission to the College of Engineering are all prescribed, it is possible that a graduate of an accredited school may not have some of the prescribed work, and so not be able to enter the freshman class in that college.

Morris Harvey College.....Barboursville, W. Va.
Moundsville High School.....Moundsville, W. Va.
Parkersburg High School.....Parkersburg, W. Va.
Pittsburg Central High School.....Pittsburg, Pa.
Salem College.....Salem, W. Va.
Scottdale High School.....Scottdale, Pa.
Sistersville High School.....Sistersville, W. Va.
State Normal School.....Athens, W. Va.
State Normal School.....Fairmont, W. Va.
State Normal School.....Glenville, W. Va.
State Normal School.....Huntington, W. Va.
State Normal School.....Shepherdstown, W. Va.
State Normal School.....West Liberty, W. Va.
Southwestern State Normal School.....California, Pa.
Wheeling High School.....Wheeling, W. Va.

RECOGNIZED PREPARATORY SCHOOLS

Recognized preparatory schools are those whose graduates have not had a sufficient number of credits to admit them to the freshman class, but receive credit toward admission for the work certified.

Belington High School.....Belington, W. Va.
Cameron High School.....Cameron, W. Va.
Charles Town High School.....Charles Town, W. Va.
Central City High School.....Central City, W. Va.
Ceredo High School.....Ceredo, W. Va.
Chester High School.....Chester, W. Va.
Claysville High School.....Claysville, Pa.
Davis Free School.....Piedmont, W. Va.
Fayetteville High School.....Oak Hill, W. Va.
Harrisville High School.....Harrisville, W. Va.
Keyser High School.....Keyser, W. Va.
McMechen High School.....McMechen, W. Va.
Mt. Wesley High School.....Berkeley Springs, W. Va.
New Cumberland High School.....New Cumberland, W. Va.
Pennsboro High School.....Pennsboro, W. Va.
Perryopolis High School.....Perryopolis, Pa.
Point Pleasant High School.....Point Pleasant, W. Va.
Ravenswood High School.....Ravenswood, W. Va.
Ronceverte High School.....Ronceverte, W. Va.
Salem High School.....Salem, W. Va.
Sutton High School.....Sutton, W. Va.

ADMISSION, REGISTRATION, AND SCHOLARSHIP

The committee on classification and grades has supervision of the admission, registration, advanced standing, classification, and scholarship of all students. The following are the general regulations relating thereto:

ADMISSION

Candidates for admission to the University must present certificates of good moral character and, if from other colleges or universities, must present letters of honorable dismissal.

Candidates for admission who come from other institutions of learning without letters of honorable dismissal may, at the discretion of the registrar, be allowed to matriculate provisionally. In every such case, the registrar will himself make immediate inquiry of the institution from which the applicant comes concerning his standing as a student in that institution. If a certificate of honorable dismissal cannot be obtained, the matriculation will be cancelled and all fees paid by the applicant will be returned.

The course of procedure above described will be followed also in cases of students from accredited schools, who offer themselves for matriculation without the regular certificate as prescribed on page 47 of this catalogue.

ENTRANCE CREDITS

1. Certificates of entrance credits must be on the blank form prescribed by the committee on classification and grades, or on a similar form, so that credit values may be readily computed.

2. The chairman of the committee, or any member acting in his stead, may list and certify the credits of any applicant for admission to the University when such credits are from an accredited school and in proper form, and are sufficient in number to entitle the applicant to classification as a freshman, or first year classman. Certificates from schools not on the accredited list must be approved by the committee.

MATRICULATION AND REGISTRATION

In order to gain admission to the University, the student must first report at the President's office in Science Hall. A blank will be furnished, which, on being signed, will be taken to the registrar. That officer will then assign the student to a class officer, and will certify to the treasurer the fees, if any, which are to be paid. On

the payment of these fees, the student will be assigned to the proper classes by his class officer. No student is permitted to become a member of any class until his registration is completed.

All students are required to register at the beginning of each term.

THE CLASS OFFICER

The duties of the class officer are as follows:

1. To assign the student to proper courses, and see that prescribed work is taken in order.

2. To supervise the selection of elective courses by the student.

3. To keep a record of the work done by the student and to recommend him for his degree or diploma when the work is completed.

4. To have general oversight of the student's college life. The student will look to his class officer for advice and guidance in all matters pertaining to his work. Withdrawal from classes, changing from one class to another, etc., will always require the class officer's consent.

MAXIMUM NUMBER OF COURSES

1. A course represents the amount of work done in one quarter (twelve weeks), class meeting five times a week, in periods of one hour in length.

2. The maximum number of courses which any student may take is four; the minimum, three.

3. When a student registers for four full courses in any quarter, the maximum number of full courses for which he may register the succeeding quarter is three.

4. No course for which credit has already been given shall be taken as one of the minimum number of courses prescribed, unless by special permission of the committee on classification and grades.

5. The committee will consider the question of granting permission to any student to take more than the prescribed amount of work only on the presentation of a petition approved and signed by the class officer, and accompanied by a statement of the student's record for the preceding quarter. Such petition must be presented within seven days after the day set in the catalogue for the opening of the quarter.

6. Fractional courses in the College of Arts and Sciences will not be counted until they amount to a full course.

SPECIAL STUDENTS

Persons who are not able to satisfy all entrance requirements, or who do not desire to become candidates for a degree, may be admitted as special students, subject to the following provisions:

1. Special students must as a rule be twenty-one years of age or over. Only in exceptional cases will permission be given to applicants under that age.

2. Special students must satisfy at least nine units of the requirements for admission, including two units of English. If the applicant is unable to satisfy the nine units required, he must register in the Preparatory School.

3. Every application for admission as a special student must be in writing, and must set forth fully the applicant's reasons, together with a detailed statement of the studies he desires to pursue.

4. Special students are subjected in all respects to the usual rules relating to registration and scholarship. They may be assigned to classes for which they apply, it being understood, however, that admission to any class rests entirely with the instructor in charge, and further, that admission to any class when so granted does not necessarily imply credit for prerequisites.

5. Special students shall not have their work certified for credit to any other institution, but a general statement of work done may be given if applied for; in every case, this statement shall show that the work was done under registration as a special student, and in case the full requirements for admission to the University have not been satisfied, the statement shall set forth that fact.

ADVANCED STANDING

1. All applications for advanced standing in college work must be made to the committee on classification and grades not later than two weeks after the applicant's registration. When certificates of work done elsewhere are offered, the committee will consider them, and, if they are adjudged sufficient, the credits they call for will be certified to the registrar by the chairman of the committee. If no certificates are offered, or those offered are not considered sufficient for the credits asked, the applicant will be sent by the committee to the heads of the various departments in which credit is sought, who will report, after examination, to the committee, on the form furnished, the numbers, names, and values of the courses, if any, for which the applicant is entitled to credit. The applicant shall, at the discretion of the committee, have the privilege of presenting his certificates to the heads of the departments, who may give them such recognition in connection with the examination as

they see proper. When the credit to be given, if any, has been determined, it shall be reported by the head of the department to the chairman of the committee, on the form provided, always under seal, and in no case must information of such credit be given to the applicant before the report has been sent to the committee. Before credits in this way are certified to the registrar, all certificates must be returned to the chairman of the committee, and by him placed on file.

CLASSIFICATION

1. No student shall be classified as a freshman who is conditioned in more than one unit of entrance requirements.

2. No student shall be classified beyond the freshman class until all preparatory conditions are removed, and credit for all prescribed freshman work is obtained.

3. No student shall be classified as a sophomore until he has received credit for at least seven and one-half courses.

4. No student shall be classified as a junior until he has received credit for at least nineteen courses.

5. No student shall be classified as a senior until he has received credit for at least thirty courses.

6. Classification of students for publication in the catalogue shall be made on the basis of the work to their credit at the close of the fall quarter each year, except in the case of students entering later in the year.

SCHOLARSHIP

1. Students are graded on a scale in which one hundred per cent is regarded as perfect and seventy per cent as a passing grade.

2. If the final grade of any student for any course is below sixty, it shall be recorded as a "failure," and the student must take the course again if he desires credit for it. If the final grade is sixty, or over, but below seventy, it shall be recorded as a "condition," and the student shall have the privilege of a second examination, which must be taken at the time designated by the instructor, and applied for not later than three days after the opening of the succeeding quarter. A condition not removed within the term following the one in which it was imposed becomes a failure. If the final grade after a second examination is again below seventy, it shall be recorded as a "failure."

3. If a student fails to register promptly at the beginning of any quarter, a deduction of two per cent from the final grade in every subject shall be made for each exercise missed, for all absences

not more than seven in number, unless such absences are excused by the committee. If the absences are more than seven in number, full credit for the course will not be given, unless such absences are excused by the committee and the work missed made up to the satisfaction of the instructor.

4. The permission of both class officer and instructor shall in all cases be necessary for the withdrawal of a student from any class, and after six weeks of any quarter have elapsed, the permission of the committee on classification and grades must also be obtained.

If a student discontinues a course without permission as above, the standing shall be reported to the registrar as zero. If the student attends the course throughout the quarter and is absent from examination, without permission, the instructor shall count the examination as zero, and report the final grade as one-half the recitation grade. If the student is unavoidably absent from examination, and has a recitation grade of eighty-five or over, the instructor may report the recitation grade as the final grade in the subject. If the recitation grade is under eighty-five, and the absence from examination is for reasons satisfactory to the instructor, the fact will be recorded on the card returned to the class officer, and the student shall have the privilege of taking the examination at a later time.

In every case, except as above, the class card must bear a final grade, and the class officer's report to the registrar must show a final grade.

All instructors are required to report at the end of each term grades in all courses taken with them, and not hold them over to a later term or report them as incomplete.

5. Any student who fails to make a standing of sixty per cent in each of two or more subjects, or who fails to make an average standing of sixty per cent in all of his courses for any quarter, shall be suspended from the University for the succeeding quarter. If, however, the failure as above is due to the abandonment of any class, or withdrawal from the University without permission, or to absence from examination without reasonable excuse, the suspension shall be indefinite. If a student suspended for any quarter by the operation of this rule re-enters the University and again becomes subject to it, his suspension shall be indefinite.

The committee on classification and grades will relieve any student from the operation of this rule for satisfactory reasons. The student asking for relief must, when possible, appear before the committee in person; a statement from the student's class officer and instructors concerned will also be required.

6. In case of the withdrawal of a student from the University, the class officer shall report the fact in writing to the committee on

classification and grades, together with a full statement of the reasons for such withdrawal and circumstances attendant thereon. If in the judgment of the committee the reasons given for withdrawal are insufficient, the student will be dealt with as subject to the sixty per cent rule. (See rule 5 above.)

7. A report of each student's work is made at the close of every quarter, either to the student himself or to his parent or guardian. A complete record is also kept in the registrar's office. The fee for making a copy of this record after the quarterly reports have been sent out is one dollar.

THESIS

If a thesis is required by the class officer of a candidate for the bachelor's degree, the student will observe the following regulations:

Theses must be typewritten with black non-copying record ink, on Crane's Japanese linen paper, of quality 24 pounds to the ream, folio size. This paper, of right quality and correct size, viz., 8x10 inches, may be obtained at the University book room, or at any book store in Morgantown. There must be a margin of one and one-fourth inches at the left edge of each sheet, and a margin of three-fourths of an inch on the other edges. The title page should follow, *mutatis mutandis*, the sample title page on the bulletin board in the Library.

When the thesis is typewritten and ready for binding, the student will secure the written approval of the professor, under whose direction the thesis has been prepared, and the librarian's receipt for the thesis fee. The thesis will then be presented to the committee on classification and grades. The thesis must be in the hands of this committee at least thirty days before the date on which the degree is to be conferred.

The committee on classification and grades will not receive a thesis from any student until he has received credit for thirty-four college courses.

GENERAL INFORMATION

DISCIPLINE

The rules and regulations which students are required to observe are few, simple, and reasonable:—civil and orderly conduct; punctuality and regularity in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed, and abstinence from drinking, gambling, and like gross vices.

Students who cannot, or will not, comply with these requirements will not be allowed to remain in the University.

All matters of discipline are in charge of the University Council.

CHAPEL EXERCISES

The regular University chapel exercises consist of singing, reading the Scriptures, and prayer. The service is conducted by the chaplain of the University, or by some one designated by him. The singing is in charge of the director of the School of Music. Attendance upon chapel exercises is voluntary; but patrons of the University who wish the students under their charge to attend these exercises may have them enrolled by making such desire known to the University chaplain.

CHRISTIAN ASSOCIATIONS

The Young Men's Christian Association of West Virginia University was organized for the purpose of encouraging active Christian work among its own members, and of promoting the spiritual growth of all the young men of the University. Regular meetings are held every Friday evening at 6:15 in the Association room. All young men of the University who are members of evangelical churches are eligible to active membership in the Association; young men who are not connected with any church may become associate members. A four years' course of Bible study is maintained by the Association. Delegates are sent each year to the various student conventions. Mr. E. H. Munson is the general secretary of the association, and gives his full time to the work. His office is No. —, Martin Hall.

An advisory board chosen by the Association and composed of members of the faculty, prominent business men of the town, and students, has general control of the affairs of the Association.

Membership in the Young Women's Christian Association is open to young women of the University on the same terms as those stated above for the Young Men's Christian Association. Regular devotional meetings are held every Friday at 4 p. m. in Columbian Hall.

OTHER SOCIETIES

1. The Columbian Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

2. The Parthenon Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

3. The Debating Association of West Virginia University. Organized for the purpose of fostering interest in general debate, and for promoting annually a series of inter-collegiate contests.

4. The Choral Society. Regular meetings every Monday at 7:30 p. m. in Commencement Hall. Membership open to all students in the School of Music and all others interested.

5. The Athletic Association. Organized for the purpose of encouraging and developing the athletic interests of the University. Incorporated under the laws of West Virginia. Membership open to all students of the University.

6. The Students' Publishing Association. Organized for the purpose of publishing the college papers. At present there are published the Athenaeum, a weekly newspaper, and the Monongalian, a quarterly literary magazine.

7. The Engineering Society. Regular meetings the first and third Friday nights of each month in its room in Engineering Hall. Membership open to all students in the College of Engineering and Mechanic Arts.

8. The University Grange, Number 372, Patrons of Husbandry. Regular meetings every Tuesday night. Membership open to all students in the College of Agriculture and to others who may be elected.

9. The English Club. Regular meetings on the first Thursday night of every month.

10. The Beowulf Gedriht. Regular meetings in October, November, February, April, and May. Open to all members of the University upon the fulfillment of certain scholarship qualifications.

11. The West Virginia University Law Society. Regular meetings at 9 a. m. every Saturday during the term. Membership open to all students in the College of Law.

PRIZES

All contestants in any of the contests in oratory, declamation, or debate, must have received credit for at least one course in elocution.

No composition, in whole or in part, shall be submitted in competition for two prizes.

Only undergraduate students are eligible for any prize offered.

No student shall be eligible to enter any contest, who has not been a resident student in this University for at least one quarter

preceding the quarter in which the contest is to be held, and who is not a resident student in good standing in the University in the quarter in which the contest is held.

No successful contestant may become for a second time a competitor for the same prize.

If in any contest there are fewer than two competitors, no prize will be given in that contest.

Students intending to compete in any essay-writing contest must notify the chairman of the committee on ways and means not later than March 15. Three typewritten copies of each essay must be in the hands of the chairman of the committee not later than May 15.

The conditions upon which the awards in the several contests are made may be learned upon application at the President's office, or to the members of the committee on ways and means.

The following prizes are open to students in various departments of the University:

I. The Inter-Society Prizes

Prizes aggregating one hundred and fifteen dollars are awarded annually by the board of regents of the University to the literary society whose representatives excel in declamation, original oratory, essay-writing, and debate.

II. The Regents' Prize in Composition

A prize of fifty dollars is awarded annually by the board of regents of the University to the student in any one of the regular college courses who shall write the best essay on a topic selected by the committee on ways and means. The subject for 1909-10 is "Darwin's Influence on Modern Thought."

III. The James F. Thompson Prize in Anatomy

A prize of twenty-five dollars, the gift of Mr. James F. Thompson, of Martinsburg, W. Va., will be awarded annually to the undergraduate student who does the best work in anatomy for three quarters.

IV. The Edward Thompson Company Prize

The Edward Thompson Company offers for the year 1909-10 to the student in the senior law class who shall write the best essay on some subject in law, to be selected by the faculty of the College of Law, a prize, consisting of a set of Encyclopedia of Pleading and Practice, in twenty-three volumes. The value of this work is $138.00.

V. The Bryan Prize in Political Science

The Hon. William J. Bryan has given a sum of money, the annual income of which is to be offered as a prize to the student in the University who shall write the best essay on some subject in the science of government. The amount of the prize for the present is fifteen dollars. The subject for 1909-10 is "Executive Aggression."

VI. The Tax Commission Prize

The members of the State Tax Commission of 1902, W. P. Hubbard, Henry G. Davis, John K. Thompson, L. J. Williams, and J. H. Holt, have donated the sum of $1,350, the income of which is to be used as a prize for the "best original work bearing on matters of taxation in West Virginia." The conditions of competition are determined by the University Council. The amount of the prize at present is $70.00. For the year 1909-10 this prize will be given for the best essay on the subject, "Merits and Defects of the General Property Tax."

VII. The William Dulles, Jr., Prizes

Mr. William Dulles, Jr., of New York City, offers prizes aggregating one hundred and twenty dollars for excellence in debating. These prizes are offered to the three universities composing the Tri-State Debating League, namely the West Virginia University, the University of Wooster, and the Western University of Pennsylvania. At each of the three debates of the League two awards are made, one first prize of twenty-five dollars, and one second prize of fifteen dollars to the first and second best of the six competing debaters.

VIII. The Russell Love Morris Prize in Civil and Mining Engineering

Russell Love Morris, C.E., Professor of Civil Engineering, offers a prize of fifty dollars annually to the student in the department of civil and mining engineering who presents the best thesis on some subject of special application to the needs and resources of West Virginia.

WOMAN'S HALL

At the meeting of the Board of Regents in June, 1907, it was decided to lease the building formerly known as Episcopal Hall as a dormintory for young women. The building was thoroughly renovated and refurnished, and was opened to the young women of the University at the beginning of the fall term, 1907. It is centrally located at the corner of Willey and Spruce streets, and will accom-

modate between forty and fifty young women. As heretofore, Miss Susan Maxwell Moore, Dean of Women, is in charge of the Hall. Anyone desiring information as to prices, or available rooms in the Hall, will apply to Miss Moore.

BOARDING AND ROOMING PLACES

The Y. M. C. A. and Y. W. C. A. of the University have charge of the matter of boarding and rooming places, under the general direction of the faculty. They will collect and keep a complete list of boarding and rooming places, and committees will be present in the association rooms on the second floor of Martin Hall, during the opening days of each term, to give aid and information to students.

Young men desiring information in advance of their arrival in Morgantown may address the Secretary, Mr. E. H. Munson, Morgantown, W. Va. Young women may address Miss Pearl Hodges, 552 Spruce street, Morgantown, W. Va.

Committees from the Y. M. C. A. and Y. W. C. A. meet new students at trains, and render them every assistance possible in getting settled in Morgantown.

AID FOR STUDENTS

The committee on students' aid undertakes to assist earnest and worthy students, who are dependent upon their own efforts for their education, to obtain various forms of employment in Morgantown, which may not interfere with their studies and will help to defray their expenses. The attainment of a creditable degree of scholarship will be an advantage for students applying to this committee.

This committee has charge of all requests which come to the University for students to fill various positions. Calls of this kind, especially upon the engineering department, are frequent.

The establishment of a fund is contemplated which, under proper conditions, will be loaned to students who would otherwise be unable to complete their course. Contributions to this fund, which will be under the direction of a board of trustees, are solicited. Communications in regard to contributions should be addressed to the president.

Y. W. C. A. SELF-HELP COMMITTEE

There are many young women who would enter the University if they could secure worthy employment paying enough to meet a part of the expenses incurred by living away from home. The Young

Woman's Christian Association, through its self-help committee, has undertaken to meet this demand. An employment bureau has been established where the women of Morgantown who desire such help as a University woman can give, may become acquainted with the students who wish to work; thus two great needs are met. The work offered is light housework, assisting at social functions, tutoring, mending, caring for children, sewing, etc. The remuneration depends upon the kind of work done.

For further information address Miss Rachel Whitham, Y. W. C. A. Employment Bureau, Beverly Avenue, Morgantown, W. Va.

TEACHERS' BUREAU OF INFORMATION

The Teachers' Bureau of Information, under the direction of the department of education, has for its aim:—

1. To keep a record of the graduates of the University who wish to teach, to gather information as to their academic and professional qualifications and personal fitness for school work, and to recommend for vacancies those who seem most likely to prove themselves efficient.

2. To keep a similar record of alumni who wish to be transferred to other positions.

3. To assist boards of education and other school officials in securing teachers, and to co-operate with teachers' agencies in placing graduates of the University.

Students desiring recommendation for positions as teachers should do at least one year's work, or three courses, in education. Those desiring recommendation for a position in a normal school or as principal or superintendent of schools, should do at least two years' work, or six courses, in education.

No student is assured a position. General letters of recommendation are not given to students. Information obtained from professors and others is regarded as confidential. No charge is made for any services rendered. Blanks for registration will be furnished on application. The following is the committee on recommendation: President Purinton, Professor Hodges, and Professor Deahl, secretary.

THE COLLEGE OF ARTS AND SCIENCES

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President and Professor of Philosophy*

JAMES SCOTT STEWART, M.S., *Professor of Mathematics, Emeritus*

ROBERT WILLIAM DOUTHAT, PH.D., *Professor of the Latin Language and Literature, Emeritus*

POWELL BENTON REYNOLDS, D.D., *Chaplain and Professor of Economics and Sociology*

ALEXANDER REID WHITEHILL, PH.D., *Professor of Chemistry*

SAMUEL B. BROWN, A.M., *Professor of Geology and Mineralogy*

ROBERT ALLEN ARMSTRONG, A.M., *Professor of the English Language and Literature*

THOMAS EDWARD HODGES, A.M., *Professor of Physics*

ALFRED JARRETT HARE, A.M., *Professor of the Latin Language and Literature*

CHARLES HENRY PATTERSON, A.M., *Professor of Rhetoric*

FREDERICK WILSON TRUSCOTT, PH.D., *Professor of Germanic Languages and Literatures*

HENRY SHERWOOD GREEN, LL.D., *Professor of the Greek Language and Literature*

JASPER NEWTON DEAHL, PH.D., *Professor of Education*

JOHN LEWIS SHELDON, PH.D., *Professor of Botany and Bacteriology*

JAMES MORTON CALLAHAN, PH.D., *Professor of History and Political Science*

ANTHONY WENCEL CHEZ, A.B., *Director of Physical Training*

JOHN NATHAN SIMPSON, M.D., *Professor of Anatomy and Physiology*

JOHN HARRINGTON COX, A.M., *Professor of English Philology*

FREDERICK LAWRENCE KORTRIGHT, D.Sc., *Professor of Chemistry*

FRANK BUTLER TROTTER, A.M., *Professor of the Latin Language and Literature*

HARRY ANTHONY EATON, LL.B., *Professor of Military Science and Tactics, and Commandant of Cadets*

JOHN ARNDT EIESLAND, Ph.D., *Professor of Mathematics*

JUSTIN FRANK GRANT, M.D., *Professor of Anatomy and Pathology*

ALBERT MOORE REESE, Ph.D., *Professor of Zoology*

OLIVER PERRY CHITWOOD, Ph.D., *Professor of European History*

C. EDMUND NEIL, A.B., *Professor of Elocution and Oratory*

WAITMAN BARBE, Litt.D., *Associate Professor of the English Language and Literature, and Assistant to the President*

WILLIAM JACKSON LEONARD, *Associate Professor of Fine Arts*

CHARLES COLLIER HOLDEN, A.B., *Assistant Professor of Romance Languages*

SIMEON CONANT SMITH, A.M., *Assistant Professor of Rhetoric*

MADISON STATHERS, Ph.D., *Assistant Professor of Romance Languages*

GEORGE PERRY GRIMSLEY, Ph.D., *Special Lecturer in Economic Geology*

WILLIAM MICHAEL BAUMGARTNER, A.B., *Instructor in German*

CLARENCE POST, A.B., *Instructor in Physics*

MABEL CONSTANCE FOSTER, *Assistant in Music*

LOUISE FERRIS CHEZ, *Assistant Director of Physical Training*

ENTRANCE REQUIREMENTS

For admission to the College of Arts and Sciences, the candidate must have credit for fifteen units, obtained by examination or on certificate from a duly accredited secondary school.

A unit in any subject represents the amount of work that may be done in a standard high school in a year of thirty-six weeks, with five recitation periods of forty-five minutes each, per week.

Of the fifteen units which must be offered for admission to the course leading to the degree of Bachelor of Arts, nine are definitely prescribed as follows:

	Units
English	3
Latin	2
History	1
Mathematics	2
Algebra 1	
Plane geometry 1	
Science	1
Physics, Chemistry, Botany, or Zoology	
Total prescribed	9

The remaining six units may be chosen as electives from the following list:

	Units
Latin	1 to 2
Greek	2 to 3
German	2 to 3
French	2 to 3
Mathematics	½ to 1½
Algebra ½	
Solid geometry ½	
Plane trigonometry ½	
History and Civics	½ to 2
Physics	1
Chemistry	1
Botany	1
Zoology	1
Physical geography	½
Physiology	½
Drawing	1

A single unit of language will be accepted provided further work in that language is taken in the University.

For admission to the course leading to the degree of Bachelor of Science the requirements are the same as the foregoing, except that a modern language may be substituted for the two units of Latin prescribed and an additional unit of mathematics is prescribed—one-half unit of algebra and one-half unit of solid geometry or plane trigonometry.

SCOPE OF THE ENTRANCE REQUIREMENTS

ENGLISH

The three units in English composition and literature should cover the following subjects:

Composition.—Sustained and regular practice in writing is earnestly recommended. The student should prepare numerous written exercises throughout the four years of the high school course, and a sufficient number of these exercises should be corrected by the teacher and revised by the student to secure the desired accuracy. The subjects upon which the student writes should not be drawn exclusively from literature; a considerable proportion of them should be so distributed as to give proper training in the various types of discourse, namely, description, narration, argument, and exposition.

Rhetoric.—The student should be grounded in the essentials of rhetoric, but those principles should receive emphasis which are most likely to be of service to him in his practice in writing, such as the principles of sentence structure, paragraphing, and outline writing.

Grammar.—The student should be prepared to state intelligently the essential principles of grammar and to explain the syntactical structure of any sentence encountered in his reading.

Reading of Classics.—For 1910 and 1911 the following classics are recommended:

For reading, ten books selected from the following list:

Group I. (two to be selected): Shakespeare's As You Like It, Henry V, Julius Caesar, The Merchant of Venice, Twelfth Night. Group II. (one to be selected): Bacon's Essays; Bunyan's The Pilgrim's Progress, Part I; The Sir Roger de Coverley Papers in The Spectator; Franklin's Autobiography. Group III. (one to be selected): Pope's The Rape of the Lock; Goldsmith's The Deserted Village; Palgrave's Golden Treasury (First Series) Books II. and III., with especial attention to Dryden, Collins, Gray, Cowper, and Burns. Group IV. (two to be selected): Goldsmith's The Vicar of Wakefield; Scott's Ivanhoe; Scott's Quentin Durward; Hawthorne's The House of the Seven Gables; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; Dickens' A Tale of Two Cities; George Eliot's Silas Marner; Blackmore's Lorna

Doone. Group V. (two to be selected): Irving's Sketch Book; Lamb's Essays of Elia; De Quincey's Joan of Arc and The English Mail Coach; Carlyle's Heroes and Hero Worship; Emerson's Essays (Selected); Ruskin's Sesame and Lilies. Group VI. (two to be selected): Coleridge's The Ancient Mariner; Scott's The Lady of the Lake; Byron's Mazeppa and The Prisoner of Chillon; Palgrave's Golden Treasury (First Series) Book IV., with especial attention to Wordworth, Keats, and Shelley; Macaulay's Lays of Ancient Rome; Poe's Poems; Lowell's The Vision of Sir Launfal; Arnold's Sohrab and Rustum; Longfellow's The Courtship of Miles Standish; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Selected Poems.

For study and practice:

Shakespeare's Macbeth, Milton's Shorter Poems, Washington's Farewell Address and Webster's First Bunker Hill Oration, Macaulay's Life of Johnson or Carlyle's Essay on Burns.

Although the books mentioned above are recommended as preparation for this part of the requirement, they are not prescribed. Books of equal merit, covering a similar range of literary types, will be accepted as equivalents. It is expected that the student will have read the books appreciatively and will have made himself familiar with the subject-matter and the form of each work. The reading should be connected, in reasonable measure, with the lives and characters of the authors read and with the history of their times.

It is recommended that in connection with the reading of classics, the memorizing of notable passages, in both prose and poetry, should form a regular exercise throughout the whole preparatory period.

The work in English should be distributed throughout the entire four years of the high school course.

LATIN

(a) One unit—Such knowledge of inflections and syntax as is given in any good preparatory Latin book, together with the ability to read easy selections from Caesar.

(b) One unit—Four books of Caesar's Gallic War, or its equivalent in Latin of equal difficulty. The ability to write simple Latin based on the text.

(c) One unit—Six orations of Cicero. The ability to write simple Latin based on the text. The simpler historical references and the fundamental facts of Latin syntax.

(d) One unit—Six books of Vergil, with history and mythology. Scansion of hexameter verse. Two of the three prescribed units to be offered must be (a) and (b). Either (c) or (d) may be offered for the third unit, but one year of composition must be included.

GREEK

(a) One unit—Introductory lessons, elements of grammar; easy translations from the Anabasis; translations into Greek of easy continuous prose based upon the Anabasis.

(b) One unit—Xenophon—the first four books of the Anabasis.

(c) One unit—Homer—The first three books of the Iliad (omitting II-494 to end) and the Homeric constructions, forms, and prosody; constant practice in sight translation and prose composition.

GERMAN

(a) One unit—A thorough knowledge of elementary syntax; constant drill in pronunciation, oral translation, and composition; translation of seventy-five to one hundred pages; advanced syntax; composition throughout the year.

(b) One unit—Modern prose and familiar poems, two hundred pages; advanced syntax; intermediate composition throughout the year.

(c) One unit—Advanced prose, four hundred pages; advanced composition throughout the year.

FRENCH

(a) One unit—(1) The essential principles of French etymology and syntax, and, especially, a thorough knowledge of the pronoun and of the regular and irregular verb; (2) ability to write in French, sentences of moderate difficulty; (3) the reading of from one hundred and fifty to two hundred pages of modern French prose; (4) ability to pronounce the language correctly and with some fluency.

(b) One unit—(1) Continued systematic study of French Grammar, including syntax; (2) the reading of from three to four hundred pages of modern French; (3) the practice in writing from dictation.

(c) One unit—(1) Twenty pages of advanced prose composition; (2) the reading of from four to six hundred pages of French, including three plays of Corneille and three of Racine.

HISTORY

From one to three units may be offered, selected from the following:

(a) Ancient History to 800 A. D.—one unit.

(b) Mediaeval and Modern European History—one-half to one unit. The amount of credit will depend upon the time given to the subject.

(c) English History—one-half to one unit. The amount of credit will depend upon time given.

(d) American History, or American History and Civics—one unit.

The student should be familiar with the important events of the period of history which he offers for credit, and should have a clear knowledge of the general development.

A whole year that covers the whole field of general history with a good text-book and with notes on collateral reading and preparation of maps will be accepted as one unit, although it is believed that better results will be obtained by spending a whole year on ancient history and another year on the mediaeval and modern period.

American history and civics should be preceded by English history, and should not be given before the third year in the high school course, in case three years are given to history. Ancint history should be followed by English history in case mediaeval and modern history are not given.

The study of civics must not precede the study of American history; and, if studied as a separate branch following the course in American history, some advanced text such as Forman's Advanced Civics should be used. An outline knowledge of elementary civics, such as is presented in Forman's First Lessons in Civics, or in Peterman's Civics, is presupposed.

MATHEMATICS

(a) Algebra through quadratics—one unit. The four fundamental operations for rational algebraic expression; factoring, highest common factor, lowest common multiple, complex fractions, solution of equations of the first degree, radicals including the extraction of the square root of polynomials and numbers, fractional and negative exponents, quadratic equations, and equations containing one or more unknown quantities that can be solved by the methods of quadratic equations, and problems involving the use of such equations.

(b) Plane geometry—one unit. The completion of any standard text with original exercises and problems.

(c) Algebra—one-half unit. Review of essentials followed by ratio and proportion, the binomial theorem for positive and integral exponents, arithmetical and geometrical progressions.

(d) Solid geometry—one-half unit. Properties of straight lines and planes, dihedral and polyhedral angles, projections, polyhedrons, including prisms, pyramids, and the regular solids, cylinders, cones, and spheres, spherical triangles, measurements of surfaces and solids.

(e) Plane trigonometry—one-half unit. Definitions and relations of the six trigonometrical functions as ratios, proofs of important formulae, theory of logarithms and use of tables, solution of right and oblique plane triangles.

SCIENCE

(a) Physics—one unit. Credit will be allowed for the requisite time spent upon any standard elementary text-book, if the work is accomplished by individual laboratory work. It will be to the advantage of students asking full credit to present their laboratory note-books. One full year should be given to the work. At least one exercise each week should be in the laboratory.

(b) Chemistry—one unit. Credit will be allowed for the completion in a satisfactory manner of any standard elementary text in inorganic chemistry, accompanied by individual laboratory work. A full year should be given to the work.

(c) Botany—one unit.

(d) Zoology—one unit.

Work in either Botany or Zoology, to be credited, must have been accompanied by individual laboratory work. The exact extent of the work which should be done cannot be stated here, but, for the maximum credit, it should be as much as a competent teacher, trained in laboratory methods, can accomplish in from one, to one and one-half years. In estimating the time employed, two hours of laboratory work will be counted as the equivalent of one recitation period. It will be necessary for applicants to present their laboratory notes and drawings.

In Botany the class should cover the ground of Coulter's "A Text-Book in Botany," or Bergen's "Foundation of Botany," or their equivalent.

(e) Physical Geography—one-half unit.

(f) Physiology—one-half unit.

Credit for one-half unit each in Physical Geography and Physiology will be allowed—as electives only—if taught in a scientific manner in an accredited or recognized secondary school. The use of a standard text should be supplemented by proper illustrative methods and proper observation. One-half year must be given to each subject.

In Zoology the class work should cover about what is represented in Kellogg's "Elementary Zoology" (Henry Holt), or in

Parker and Haswell's Zoology, one-volume edition (Macmillan & Co.). The amount of laboratory work that should be done is somewhat less than is outlined in Scheffer's manual (Blakiston).

DRAWING

One unit. To receive entrance credit in free hand drawing, instruction should have been designed to give the student an intelligent and accurate conception of form, light, and shade, and the ability to express simply and directly, such objects as natural and geometrical form, still life, architectural details, and casts from nature, the antique, and life.

The training of the eye to observe with understanding, rather than the teaching of any particular method of expression, should be the aim of the instructor. No mechanical aids should be employed. The pencil is recommended as the simplest and most convenient medium for elementary work. It is desirable that students seeking credit for drawing shall submit their work in addition to their general certificate.

DEGREES

BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES

A baccalaureate degree in the College of Arts and Sciences is conferred upon any student who satisfies all entrance requirements and satisfactorily completes forty-two college courses, selected in accordance with the following provisions:

The subjects of study are arranged in three groups:

I. LANGUAGE: Latin, Greek, French, Spanish, Italian, German, English.

II. SCIENCE: Mathematics and Astronomy, Engineering, Physics, Chemistry, Geology, Botany, Horticulture, Agriculture, Zoology, Anatomy and Physiology, Bacteriology.

III. PHILOSOPHY: Philosophy, Education, History, Law, Political Science, Economics, Sociology, Music, Fine Arts.

REQUIREMENTS

I. GENERAL REQUIREMENTS:

1. Major: 9 courses in one group, which may be
   (a) 9 courses in one subject, or
   (b) 6 courses in one subject and 3 courses in another subject.
2. Minor: 6 courses in another group.
3. Sub-minor: 3 courses in remaining group.

The student must select his major subject when he becomes a candidate for a degree. The head of the department to which this subject belongs then becomes the student's class officer. When the student has selected his major subject, he will not be permitted to change to another major without the consent of the committee on classification and grades.

A thesis may be required at the option of the class officer, in which case it shall count as one of the forty-two courses required.

II. SPECIAL REQUIREMENTS:

1. For the degree of A.B.: English 10 and 11 unless anticipated by an examination; 7 courses in Latin in addition to the prescribed preparatory work, or 5 courses in Greek and 2 courses in Latin in addition to the prescribed preparatory work in Latin, or 3 courses in Greek, 4 courses in Latin and the prescribed preparatory work in Latin; 3 courses in a modern language. These special requirements in English and in Latin or Greek must be satisfied in the freshman year, unless the student lacks more than three courses in Latin or Greek, in which case the remaining courses must be taken in subsequent years until completed.
2. For the degree of B.S.:
   (a) English 10 and 11 unless anticipated by examination; 6 courses of German and 3 courses of French, or 6 courses of French and 3 courses of German; 3 courses of mathematics. These special requirements must be satisfied in the freshman year, unless the student lacks more than three courses in modern language, in which case the remaining courses must be taken in subsequent years until completed.
   (b) The major in the science group.

III. The additional number of courses necessary to make a total of forty-two courses may be selected from the general University courses, with the approval of the class officer and the committee on classification and grades.

Note: Fewer than three courses in an ancient or a modern language will not be counted toward any University degree, diploma, or certificate until a third course in the same language has been taken.

Suggested Schedule for Students in the A.B. Course

Freshman

	Fall	*Winter*	*Spring*
9:30	Latin or Greek	Latin or Greek	Latin or Greek
10:30	English 10	English 11	
11:30	Mathematics 7 or Science 1	Mathematics 8 or Science 2	Mathematics 9 or Science 3

The laboratory work of the science courses will be taken in the afternoon, or at other hours as arranged.

Sophomore

9:30	Latin French 1 or German 1	Latin, French 2 or German 2	Latin French 3 or German 3
10:30	Greek	Greek	Greek
1:30	Laboratory Science	Laboratory Science	Laboratory Science

Suggested Schedule for Students in the B.S. Course

Freshman

	Fall	*Winter*	*Spring*
9:30	German 1 or French 1	German 2 or French 2	German 3 or French 3
10:30	English 10	English 11	
11:30	Mathematics 7	Mathematics 8	Mathematics 9

Sophomore

8:30	German 4 or French 4	German 5 or French 5	German 6 or French 6
9:30	French 1 or German 1	French 2 or German 2	French 3 or German 3

MASTER OF ARTS

The degree of Master of Arts is conferred upon graduates of West Virginia University or of other institutions of equal grade upon the following conditions:

1. The candidate must pursue studies in residence at this University for at least three quarters.

2. The application of the student to become a candidate for the degree of Master of Arts must be accompanied by the proper credentials and a general outline of the course of study.

3. If the application is accepted, the committee on classification and grades will appoint a sub-committee of three, consisting of the candidate's major professor and two other professors, whose duties shall be:

(a) To arrange and approve a specific course of study
(b) To act as advisors
(c) To examine and pass upon the thesis
(d) To conduct the final oral examination

4. The candidate shall present nine courses, or their equivalent, at least three of which shall belong to his major subject. In no case shall the aggregate number of major courses be fewer than twelve. The remainder of the student's work shall be in one or more allied subjects.

5. The specific course of study must be presented to the committee on classification and grades within the first four weeks after the opening of the fall term.

6. The candidate shall present a thesis showing marked attainment in his major subject. The thesis shall be prepared under the direction of the head of the department in which the student has his major, and shall be submitted for the approval of the committee on classification and grades at least four weeks previous to the commencement day at which the degree is expected. The thesis shall be presented in such form as the committee on classification and grades shall prescribe and approve.

7. If the thesis is approved, two typewritten or printed copies shall be deposited in the University library at least one week before the degree is to be conferred.

8. The oral examination shall cover the thesis and the major courses pursued by the candidate, or such part thereof as the sub-committee shall deem desirable.

9. The committee on classification and grades will set the time for the oral examination and shall appoint some one to represent them at the examination. The examination must be held at least three weeks before commencement day.

10. The sub-committee will report their opinion of the thesis and the result of the examination to the committee on classification and grades at least ten days before commencement day.

11. No work done before graduation will be credited toward the master's degree.

12. In case a student has failed to take the A.M. degree within two years after his course of study has been approved, his candidacy shall lapse and can be renewed only upon a new application to the committee on classification and grades.

MASTER OF SCIENCE

The degree of Master of Science is conferred upon students whose baccalaureate degree has been in science, upon the same conditions as those governing candidates for the degree of Master of Arts, stated above.

DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy is conferred upon Masters of Arts of West Virginia University, or holders of an equivalent degree, upon the following conditions:

1. Candidates must have spent at least two years in resident study at some university, and must be in residence at this university during the last three quarters before receiving the degree. The requirements of time, however, are wholly secondary. The degree will not be given for the completion of prescribed work, nor for study during a stated period, but only on the ground of long study and high attainments in one branch of learning.

2. Candidates shall choose a major subject and cognate minor work. To the latter they shall devote not more than one-third of their time.

3. The candidate must prepare (under the direction of the head of the department in which he has his major) a dissertation which shall give evidence of his power of independent investigation, and shall be a real contribution to knowledge.

4. Not later than nine months before the date on which the candidate expects to receive the degree, he shall file with the committee on classification and grades the subject of his thesis, with the approval of his major professor, a full statement of his work in candidacy for the degree, and shall satisfy this committee of his ability to use French and German in his investigation.

5. The thesis shall be presented to the committee on classification and grades at least two months before the date on which the degree is expected. It shall be referred to a committee of three, one of whom shall be a person not connected with the University. If the thesis is approved, the candidate shall proceed to an examination, which shall be conducted by the instructors in charge of his subjects, with the aid of the same committee of three and the committee

on classification and grades. The date of the examination shall be determined by the committee on classification and grades.

6. If the candidate satisfactorily passes the examination he shall before receiving the degree, deposit with the librarian of the University a typewritten or printed copy of the thesis, but if the thesis cannot be published before the conferring of the degree, the candidate must either furnish the committee on classification and grades evidence of completed arrangements for publication, or deposit with the treasurer of the University a sufficient sum to cover the cost of publication in approved form. When the thesis is published one hundred copies shall be presented to the University library, and the deposit made with the treasurer will be returned.

DEPARTMENTS OF INSTRUCTION

In the following announcements unless otherwise noted, each course described is a full course, the class meeting five times a week, Mondays to Fridays inclusive, through one entire quarter. Whenever possible, the quarter during which the course is given, the hour, the name of the instructor, and class room, are stated at the end of the announcement of each course. For convenience it is customary to designate the courses of study by the name of the department and the number of the particular course. Thus the course in psychology is known as "Philosophy 2"; the course in plane trigonometry is known as "Mathematics 9"; the course in electrical measurements is known as "Physics 15"; etc. The abbreviations used are: W., Woodburn Hall; S., Science Hall; M., Martin Hall; C., Commencement Hall; A., Agricultural Experiment Station; S. F., South Fife Cottage; N. F., North Fife Cottage; G., Gymnasium; L., Library.

The departments of instruction are arranged in alphabetical order.

AGRICULTURE

Credit will be given in the College of Arts and Sciences for any five courses given in the College of Agriculture. See page 155.

ANATOMY AND PHYSIOLOGY

Credit will be given in the College of Arts and Sciences for courses in these subjects given in the College of Medicine. See pages 187 and 189.

BOTANY AND BACTERIOLOGY

Professor Sheldon

The laboratories for botany and bacteriology are supplied with gas and electricity, hot and cold water, reagents, glassware, sterilizers, incubators, microscopes and accessories, dissecting lenses, and other necessary apparatus.

Students will find it to their advantage to consult with the head of the department before registering for courses in botany and bacteriology.

Botany

1. **Elementary Botany.** The courses in elementary botany are arranged for those who wish to obtain a practical knowledge of plants in general. An introductory study of the structure and physiology of seed plants is followed by the physiology, morphology, and life history of representative plants of common occurrence, selected from the algae, fungi, liverworts, mosses, ferns, and seed plants, with special reference to their economic importance. Lectures, recitations, and laboratory work. Fall, 10:30; N. F.

2. **Elementary Botany.** Continuation of course 1. Winter, 10:30; N. F.

3. **General Botany.** These are more advanced courses on the study of life processes, followed by the morphology, life history, and classification of representative plants selected from the different groups. Lectures, recitations, and laboratory work. Fall, 9:30; N. F.

4. **General Botany.** Continuation of course 3. Winter, 9:30; N. F.

5. **Systematic Botany of Vascular Plants.** Practice in description, identification, and classification. Field and laboratory work with frequent conferences. One or more courses. Throughout the year, hours by appointment; N. F.

6. **Elementary Plant Physiology and Pathology.** Physiology of irritability, nutrition, growth, and reproduction is followed by a study of some of the common plant diseases and their treatment. Lectures, laboratory, and field work. Spring, 9:30; N. F.

7. **Advanced Plant Physiology and Pathology.** The critical investigation of an assigned problem with frequent conferences. One or more courses. Throughout the year, hours by appointment; N. F.

Bacteriology

1. **General Bacteriology.** This course is recommended as a preparation for other courses in bacteriology and plant pathology. It may be elected by students who desire a general knowledge of bacteriology and bacteriological technique. Methods of sterilization and disinfection and the preparation and use of culture media are followed by a study of the morphology and life activities of selected non-pathogenic and pathogenic bacteria. Lectures, recitations, and laboratory work. Winter, 8:30; N. F.

3. **Agricultural Bacteriology.** This course includes a study of bacteria in their relation to fermentation and decay, to soils and crops, to the pollution of water supplies, to milk and its products, and to the diseases of cultivated plants and domestic animals. Lectures, recitations, and laboratory work. Spring, 8:30; N. F.

4. **Medical Bacteriology.** This is primarily a laboratory course, supplemented by lectures and recitations, on the preparation, sterilization, and use of culture media, followed by a study of the morphology and life history of non-pathogenic and pathogenic bacteria and pathogenic protozoa. Lectures and recitations. Fall, 8:30; N. F.

CHEMISTRY

Professor WHITEHILL and Professor KORTRIGHT

The rooms assigned to this department consist of a lecture room and two large laboratories. Connected with these are a dark room, a weighing room, and a preparation room. The laboratories afford working space for sixty-five students at a time and are supplied with water, gas, chemicals, and apparatus necessary for practical work. This apparatus includes a large number of pieces used in illustrating the elementary principles of the science, as well as many of the more expensive instruments used in analytical work. A collection of the latest reference and text-books is kept within easy reach of the students.

1. **Inorganic Chemistry.** This course is designed for beginners and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties, and compounds of the non-metallic elements, and the principles and theories of chemical philosophy. Experimental lectures, laboratory work, and recitations.
Fall, first section, 9:30; second section, 11:30; Professor WHITEHILL, 20 S.

2. **Inorganic Chemistry.** This course includes the study of the metallic elements, and special attention is paid to the application of chemistry to agriculture, engineering, medicine, and every-day life.
Winter, first section, 9:30; second section, 11:30; Professor WHITEHILL, 20 S.

3. **Organic Chemistry.** This course includes the study of the more important organic compounds, together with the laboratory

processes for the preparation of such compounds. Lectures, laboratory work, and recitations.

Spring, first section, 9:30; second section, 11:30; Professor WHITEHILL, 20 S.

On Mondays at 1:30, during the Winter and Spring quarters, a special laboratory course is given to accompany courses 1, 2, and 3, which is prescribed for all students who are taking the courses named. Students who have completed these courses elsewhere, and have received credit for the same, may be admitted to this laboratory course and will receive credit for the work done. This work is conducted jointly in the two large laboratories of the department by Professors Whitehill and Kortright, with the assistance of students who have taken advanced work in chemistry.

4. **Qualitative Analysis.** This is a laboratory course, treating of the separation and detection of the common elements. Students taking this course are under the constant and direct supervision of the instructor, and they are expected to be able at any time to answer questions concerning the theory and practice of their work. One-third course.

Fall, Tuesday and Thursday or Wednesday and Friday, 1:30; Professor KORTRIGHT. Summer, 1:30; Professor WHITEHILL, 22 S.

5. **Qualitative Analysis.** Continuation of course 4. One-third course.

Winter, Tuesday and Thursday or Wednesday and Friday, 1:30; Professor KORTRIGHT, 22 S.

6. **Elementary Quantitative Analysis.** This course includes a small number of simple gravimetric, volumetric, and electrolytic determinations, together with the study of the operations involved. One-third course.

Spring, Tuesday and Thursday or Wednesday and Friday, 1:30; Professor KORTRIGHT. Summer, 1:30; Professor WHITEHILL, 22 S.

7. **Analysis of Coal, Coke, and Water.** This is a course designed especially for engineering students, but open to all others who have the necessary preliminary training. One-third course.

Spring, Tuesday and Thursday or Wednesday and Friday, 1:30; Professor KORTRIGHT. Summer, hour to be arranged; Professor WHITEHILL, 22 S.

8. **Toxicology.** Designed especially for medical students. The course includes a study of inorganic and organic poisons, their physiological effects, and their antidotes. One-third course.

Spring, Tuesday and Thursday, 1:30; Professor KORTRIGHT, 22 S.

9. **Quantitative Analysis.** The work of this course includes a study of the theory and practice of the quantitative separation and determination of the different elements; the analysis of ores, minerals, and technical products; the proximate and ultimate analysis of organic compounds; the investigation of foods; sanitary water analysis; gas analysis; and assaying. Several courses' credit may be obtained for this work and credit is given each term for the work completed.

Fall, Winter, Spring, 1:30; Professors WHITEHILL and KORTRIGHT. Summer, hours to be arranged; Professor WHITEHILL, 22 S.

10. **Iron and Steel Analysis.** This course includes practice in the analysis of ores, iron and steel. The special methods employed are those used in the laboratories of the iron and steel works located in West Virginia and western Pennsylvania. One-third course.

Fall, Winter, Spring, Tuesday and Thursday, 1:30; Professor WHITEHILL, 21 S.

11. **Medical Organic Chemistry.** A lecture and laboratory course in special subjects of organic chemistry; as carbohydrates, fats, proteids, and foods in general.

Winter, 8:30 to 10:30; Professor KORTRIGHT, 22 S.

12. **Medical Analysis.** The study and practice of the analytical methods used in modern medicine.

Spring, 8:30 to 10:30; Professor KORTRIGHT, 22 S.

13. **Physical Chemistry.** Lectures and recitations giving a non-mathematical exposition of the fundamental principles of chemical theory as developed during recent years.

Fall, 11:30; Professor KORTRIGHT, 22 S.

14. **Organic Chemistry.** This course and the following courses are intended for students who specialize in chemistry. They consist of two lectures, or recitations, and at least six laboratory hours each week. Fall, 10:30; Professor KORTRIGHT, 22 S.

15. **Organic Chemistry.** Continuation of course 14.

Winter, 10:30; Professor KORTRIGHT, 22 S.

16. **Organic Chemistry.** Continuation of course 15.
Spring, 10:30; Professor KORTRIGHT, 22 S.

17. **Chemical Preparations.** This course is designed to meet the requirements of students who wish to specialize in chemistry, or who wish to become teachers of the science. Exercises in the construction and fitting up of apparatus will be given, and chemical manipulation will receive special attention. Quantitative work in the verification of chemical laws will be undertaken, and the course will be made as fully illustrative of laboratory processes as possible. One-half course.

Fall, Tuesday and Thursday, 1:30; Professor WHITEHILL, 21 S.

18. **Chemical Preparations.** This course is a continuation of course 17. It will include the preparation and properties of some typical organic compounds, and the work will be mostly quantitative in character. One-half course.

Winter, Tuesday and Thursday, 1:30; Professor WHITEHILL, 21 S.

19. **Chemical Calculations.** This course is designed for students who wish to study the mathematical principles which are involved in chemical operations. It includes the consideration of questions in volving weight and volume reactions, atomic and molecular weight determinations, the methods of calculating the results of analyses, and the various other computations of importance to the student of chemistry. One-half course.

Spring, Tuesday and Thursday, 1:30; Professor WHITEHILL, 21 S.

20. **Special Work.** Chemistry offers a wide field for investigation. Special work in any of the various departments of the science may be taken in the laboratory under the direction of the instructors, and credit will be given in proportion to the amount of work accomplished.

For courses in agricultural chemistry, see announcements of the College of Agriculture, page 158.

CIVIL ENGINEERING

Credit will be given in the College of Arts and Sciences for certain courses in this subject given in the College of Engineering. See page 129.

ECONOMICS AND SOCIOLOGY

Professor REYNOLDS

It is the aim of this department, as at present constituted, to give elementary and practical instruction in economics and sociology, such as will meet the requirements of a good college course and serve as an introduction to special and advanced studies in these branches.

Economics

1. **Principles of Economics.** An introduction to the study of the general subject of political economy. Special attention is given to the exposition of fundamental laws as operating in the production, distribution, exchange, and consumption of wealth. Instruction is given by means of text-book, recitations, lectures, and references to standard works. Fall, 8:30; 12 S.

2. **Distribution of Wealth.** The features and tendencies of modern industrial organization; rent, interest, wages, profits, profit-sharing, co-operation, socialism; capitalistic and labor combinations; monopolies; state regulations of corporations and industrial organizations. Text-book, lectures, assigned readings, and exercises. Winter, 8:30; 12 S.

3. **The Labor Movement.** Labor problems; history and status of labor; labor organizations, their origin, development, objects, methods, achievements, and prospects; industrial, social, and political power and influence of labor unions; labor legislation; arbitration and conciliation. Text-book, lectures, assigned readings and exercises. Spring, 8:30; 12 S.

4. **Money and Banking.** A discussion of the nature and functions of money; an examination of the monetary system of the United States, with a comparison of the monetary systems of the leading nations of the world; a sketch of monetary theories and proposed reforms; nature and functions of banks, and some requisites for an adequate national currency. Text-book, lectures, and assigned readings. Fall, 9:30; 12 S.

5. **Public Finance.** A study of public expenditures, sources of revenue, systems of taxation, financial policies, public debts, and public credit. Text-book, lectures, and assigned readings. Winter, 9:30; 12 S.

6. **Public Economics.** An examination of the relations, interests, and rights of the State in regard to economic enterprises; the practicability and expediency of public ownership and control of such enterprises, with a study of the history and results of such control so far as it has been undertaken. Text-book, lectures, and assigned readings. Spring, 9:30; 12 S.

7. **History of Economics.** An outline of the history of economic conceptions and theories from the earliest times to the present; a sketch of economic literature in Europe and the United States; economic conditions and the rise of industries; modern industrialism, its rise, character, and tendencies. Text-book, lectures, and exercises. Omitted in 1909-10. Spring, 2:00; 12 S.

Sociology

1. **Historical Sociology.** An outline of theories of the origin and development of the human species; of the origin, location, and characteristics of the different races of men; of the rise and growth of institutions and arts, such as language, government, religion, and the various forms of industry. Text-book, lectures, assigned readings, and exercises. Fall, 10:30; 12 S.

2. **Analytical Sociology.** An examination of the structure and functions of contemporary society,—social elements, social forces, social organs, social activities, social conditions, and social products. Text-book, lectures, assigned readings, and exercises. Winter, 10:30; 12 S.

3. **Practical Sociology.** An outline of the history and work of organizations for social betterment and reform; of contemporary charities, their methods and results, and of the treatment of the dependent, defective, and delinquent classes. Text-book, lectures, assigned readings, and exercises. Spring, 10:30; 12 S.

EDUCATION

Professor DEAHL

The courses offered in this department aim to contribute to the educational influences and to the professional efficiency of the schools of the state in the following way: To interest those students who may without intending to use the knowledge in teaching, desire to study the science of education as a part of their general culture course. 2. To afford university students who wish to

teach for a time after graduation the means of professional training commensurate with their academic training. 3. To furnish appropriate professional education to university students, and to any experienced teachers of suitable age and attainments, who may desire to fit themselves for teachers, principals, or superintendents of schools.

Students who elect Education as their major may combine with it a limited amount of work in psychology, sociology, or philosophy. The required minor may be in any department of the University, but students are urged to do sufficient work in some one department to prepare them to teach a particular subject, as English, physics, mathematics, etc.

1. **History of Education, Ancient and Mediaeval.** A study in the evolution of ideas and of educational ideals; education as a social and political factor in the development of civilization; a general survey of Oriental education — the Egyptian and the Hebrew education as types; Greek education, Greek life and ideals, the development of social bonds, individualism, reason, human culture, and moral freedom; Roman education—(a) pagan schools, (b) Christian schools, (c) Greek influences; early Christian schools and scholars; moslem education; the middle ages—(a) the seven liberal arts, (b) the revival of Charlemagne, (c) scholasticism, (d) rise of secular schools, (e) rise of universities. Fall, 9:30; 24 W.

2. **History of Education, Modern.** A study of the development of modern education in Europe and America; the renaissance; the reformation; teaching organizations; the development of modern educational theory--(a) humanism, (b) realism, (c) the scientific, physiological, psychological, and sociological ideas of education; the development of modern national, state, and city systems; the development of the modern curriculum and method.
Winter, 9:30; 24 W.

3. **Modern Educational Theory.** The purpose of this course is to trace the development of modern educational thought to the present time. A summary of the theory and practice of mediaeval education will be followed by a study of the educational doctrines as found in the lives and writings of Pestalozzi, Herbart, Froebel, and other reformers. Spring, 9:30; 24 W.

4. **Philosophy of Education.** This course aims to lay the basis of a scientific theory of education. The process of education is explained from the standpoint of the doctrine of evolution; the prin-

ciples thus arrived at are applied from the standpoint of the history of civilization, the developing powers of the child, and the cultivation of individual and social efficiency. Fall, 11:30; 24 W.

One-half course. Summer, 11:00; 12 M.

5. **Philosophy of Education.** A continuation of course 4.

Winter, 11:30; 24 W.

6. **School Administration and Supervision.** The purpose of courses six and seven is to present the principles that should control in the administration and supervision of schools. They are intended primarily for principals and superintendents of schools, or for those who are looking forward to such school work. Course six deals with such topics as: the functions of school boards, the control of the school and delegated powers, school buildings and grounds, the equipment of the school, the superintendent and principal as to personality and preparation, the training of teachers for elementary and secondary schools, the selection and promotion of teachers, city and rural supervision, the program of studies as to its historical development and the principles that should control in its making, examinations and tests, grading the school and promoting pupils, community organization for educational endeavor, etc.

Spring, 10:30; 24 W.

One-half course. Summer, 2:00; 12 M.

7. **School Administration and Supervision.** This course is a continuation of course six and makes a study of the following topics: business and educational administration of schools, the school system and the school, the functions of the superintendent and of the principal, the improvement of teachers and teaching, the teachers' meeting, institutes and associations, lesson-plans, progress books and reports, the program of studies in elementary and in secondary schools, school government and pupil government, the selection of books and the use of libraries, estimating teaching and the standard of school work, etc. Spring, 10:30; 24 W.

8. **Foreign School Systems.** The purpose of this course is to make a comparative study of the school systems of France and Germany, together with special features of other continental systems. The practical problems will be examined from the standpoint of American education. Omitted in 1909-10. Winter, 10:30; 24 W.

9. **School Systems, British and American.** This course deals with the development and present status of education in England, Scotland, Canada, and the United States. The practical workings of the systems will be emphasized. Winter, 10:30; 24 W.

10. The Art of Studying and Thinking and Teaching. The aim of this course is to point out how to study, how to direct the work of pupils, how to train pupils to think; to find a scientific method of the recitation and to determine the essential elements of teaching. Students will formulate and discuss lesson-plans, observe, so far as conditions will permit, lessons given by regular teachers, and report the same in class. Prerequisites, Philosophy 2 or Education 12, and Education 4 and 5. Spring, 11:30; 24 W.

One-half course. Summer, 9:00; 12 M.

11. Criticism and Supervision of Instruction. This course is planned for teachers, supervisors, principals, and superintendents of schools. It will make an intensive study and application of some fundamental principles of education in both method and program of studies. Lessons will be planned and then taught with a class of pupils in the public schools of Morgantown. The lessons thus taught will be discussed in conference. The course will afford an opportunity for observation of lessons, practice teaching, and the supervision of instruction. Prerequisite, Education 10.

Fall and Winter, hour to be arranged; 24 W.

12. Applications of Psychology in Learning and Teaching. This course will present the principles that control rational learning and successful teaching as far as such principles may be derived from psychological laws. A number of psychological topics—the senses, sensation, perception, memory, imagination, reason, association of ideas, apperception, interest and attention, mental development, will, habit, and character—will be studied. Spring, 8:30; 24 W.

13. Seminar. The curriculum of the elementary school.

Fall or Winter, 2:00; 24 W.

14. Seminar. High schools and secondary education.

Fall or Winter, 2:00; 24 W.

15. Seminar. The rural school—its function, curriculum; state, county, and district supervision. Spring, 2:00; 24 W.

Note—Education 13 and 14 will not both be given in any one term.

ENGLISH

Professor ARMSTRONG, Professor PATTERSON, Professor COX, Associate Professor BARBE, Associate Professor NEIL, and Assistant Professor SMITH.

There are three sections in this department: (1) Rhetoric, (2) English Language and Literature, (3) Elocution.

The courses in this department are open to all students who have completed the entrance requirements in English, but there are certain prerequisites for particular courses.

Rhetoric

The aim of this division of English is proficiency in English composition.

10. Composition. Daily themes and fortnightly long papers, study of prose masterpieces, conferences, recitations, class criticisms of written exercises, lectures. Required of all candidates for the baccalaureate degree in arts and sciences.

Fall, 10:30; Spring, 11:30; Professor PATTERSON, 16 W.
Fall, 11:30; Winter, 9:30; Professor SMITH, 13 W.
One-half course. Summer, 8:00; Professor ARMSTRONG, 24 W.

11. Rhetoric. Two or three themes a week, study of prose masterpieces, four long papers, conferences and class criticisms, lectures. Required of all candidates for the baccalaureate degree in arts and sciences. Winter, 10:30; Professor PATTERSON, 16 W.
Spring, 9:30; Professor SMITH, 13 W.

12. Argumentation. Study of specimens, practice, lectures. Required of all students who make English their major.

Spring, 10:30; Professor PATTERSON, 16 W.

13. Exposition. Study of specimens, practice, lectures.

Fall, 11:30; Professor PATTERSON, 16 W.

14. Description and Narration. Study of specimens, practice, lectures. Winter, 11:30; Professor SMITH, 13 W.

15. Themes. An advanced course. Daily themes are required; the class will meet the instructor twice a week in periods of one and one-half hours' length each, for criticisms and lectures; weekly conferences.

Fall and Winter, hours to be arranged; Professor PATTERSON, 16 W.
Spring, hours to be arranged; Professor SMITH, 13 W.

16. The Essay. The essayists of the nineteenth century are studied as illustrating the uses of the essay form and its growth in our literature; writing of typical essays.

Spring, 9:30; Professor PATTERSON, 16 W.

17. The Short Story. Examples of the various forms are read and methods analyzed; the development of the short story from Irving to Kipling is shown; practice in writing. Omitted in 1909-10.
Winter, 9:30; Professor PATTERSON, 16 W.

18. The Poem. The history of versification, lectures, investigation of assigned topics, composition, and criticism.
Winter, 9:30; Professor PATTERSON, 16 W.

20. The Letter. Some great writers seen in their letters and a study of their use of this form of composition; practice in writing.
Fall, 9:30; Professor SMITH, 13 W.

English Language and Literature

The aims of this division of English are: (a) a scientific knowledge of the origin and development of the English language; (b) a general acquaintance with English literature; (c) a specific knowledge of certain great authors, periods, and movements in English literature.

30. Old English. Bright's Anglo-Saxon Reader; the essentials of Anglo-Saxon grammar; translations. Required of all students who make English their major. Not elective for freshmen.
Fall, 8:30; Professor COX, 23 W.

31. Old English. Beowulf. Translation, with due attention to text, metre, literary history, etc. Prerequisite, English 30.
Winter, 8:30; Professor COX, 23 W.

32. Early Middle English. Changes in the language. Critical reading of early middle English texts. Prerequisite, English 30.
Spring, 8:30; Professor COX, 23 W.

36. General Survey of English Literature. An introduction to the study of literature. This course includes a historical view of the whole field of English literature and a close, critical study of a few classics from each of the great periods of literary development. Required of all students who make English their major.
Spring, 8:30; Professor ARMSTRONG, L.
One-half course. Summer, 8:00; Professor ARMSTRONG, 24 W.

37. Chaucer. The Canterbury Tales. During the first part of the term the work will be chiefly linguistic, with interpretation of passages. The latter part of the term will be devoted to a somewhat rapid reading, with such consideration of form, sources, etc.,

as are necessary to a clear understanding of what is read. Required of all students who make English their major.

Winter, 9:30; Professor Cox, 23 W.

39. **Shakespeare.** The aim of this course is to develop the power to read Shakespeare with intelligent appreciation. A small number of plays will be studied carefully, with special attention to exact interpretation and to those peculiarities of language in which Shakespearean usage differs from our own. Required of all students who make English their major. Fall, 10:30; Professor Cox, 23 W.

40. **Shakespeare.** This course is a continuation of course 39, with more attention to literary interpretation. Required of all students who make English their major.

Winter, 10:30; Professor ARMSTRONG, L.

One-half course. Summer, 10:00; Professor ARMSTRONG, 24 W.

41. **Shakespeare.** A literary course, intended for purposes of general culture. A number of the plays will be read, with attention to characters, plot development, etc.

Spring, 10:30; Professor ARMSTRONG, L.

42. **Milton.** This course will consider Milton's poems and the Areopagitica. Early part of the work linguistic; interpretation of passages; consideration of forms, sources, style, etc.; lectures.

Winter, 11:30; Professor Cox, 23 W.

43. **The Elizabethan Period.** From Tottel's Miscellany to the death of Spenser (1557-1599). The authors studied are Wyatt, Surrey, Roger Ascham, Foxe, Lyly, Sidney, Hooker, and Spenser. Special attention will be given to Spenser. Omitted in 1909-10.

Spring, 11:30; Professor Cox, 23 W.

45. **English Literature of the Queen Anne Period.** The course will deal with those writers who are especially representative of the classical spirit in English literature. The authors studied are Dryden, Swift, Addison, Steele, DeFoe, Pope, and Gay.

Spring, 11:30; Professor Cox, 23 W.

46. **English Literature** from the death of Swift to the publication of the Lyrical Ballads (1745-1798). The authors studied are Gray, Collins, Johnson, Goldsmith, Cowper, Sheridan, Burke, Burns, and Blake; some attention to lesser authors. Omitted in 1909-10.

Fall, 9:30; Professor ARMSTRONG, L.

47. **English Literature** from the publication of the Lyrical Ballads to the death of Scott (1798-1832). The chief authors studied are Wordsworth, Byron, Shelley, Keats, and Scott. Omitted in 1909-10. Spring, 9:30; Professor ARMSTRONG, L.

48. **English Literature** from the death of Scott to the death of Tennyson (1832-1892) — the poets. The chief authors studied are Tennyson, Browning, Arnold, Swinburne, Rossetti, and Morris. Fall, 9:30; Professor ARMSTRONG, L.

49. **English Literature** since 1832—the prose writers. The chief authors studied are Carlyle, Ruskin, Dickens, Thackeray, Eliot, and Stevenson. Omitted in 1909-10. Fall, 9:30; Professor ARMSTRONG, L.

50. **The English Old Testament.** A study of the Old Testament in English as literature; discussion of its literary forms and interpretation of some of its masterpieces. Fall, 10:30; Professor ARMSTRONG, L.

51. **The Short Story.** The short story as a form of literature. A study of its development and some of its types from Poe to Kipling. Winter, 9:30; Professor ARMSTRONG, L.

52. **American Literature.** A brief outline of its historical development and a study of selected works of representative authors. Fall, 8:30; Professor ARMSTRONG, L.

53. **The Novel.** The study in this course will include the historical development of the novel; its significance; relation to modern life; types; tendencies; reading of novels; reports; lectures. Omitted in 1909-10. Winter, 11:30; Professor Cox, 23 W.

55. **English Literature. Study of an author.** The entire production, or the most important work, of some selected author will be studied to gain a complete view. The author to be studied in 1910 is Alfred Tennyson. Winter, 8:30; Professor ARMSTRONG, L.

57. **Seminar in English Literature.** Browning's The Ring and the Book. A study in criticism and interpretation; reports by students on assigned topics; lectures. Elective upon approval of the instructor in charge. Fall, Tuesday and Thursday, 11:30; Professor Cox, 23 W.

58. **Literature in the Grades.** A course primarily for teachers but open to other students in the University. It deals with the prin-

ciples of literary criticism; application of tests; the science and art of story-telling; general and special methods of presentation; the tributaries of the literary stream; course of study; bibliography.
Spring, 9:30; Professor Cox, 23 W.

59. The English New Testament. A study of the New Testament in English as literature. All the books will be read and studied with attention to literary form and interpretation.
Spring, 9:30; Professor ARMSTRONG, L.

NOTE:—The instructors in the English language hold themselves ready to assist and advise competent students who may propose plans of special study that meet the approval of the department.

Elocution

The aim of this division of English is artistic expression in all the forms of public speaking.

NOTE:—The necessity of English literature in connection with the work in elocution cannot be too often impressed. No student will be recommended as a teacher of elocution, or as a public reader, unless he has had, in addition to his courses in elocution, at least six courses in English literature.

Requirements for Certificates. Students applying for a certificate in elocution must have reached full senior standing in the College of Arts and Sciences of this University, or in some school of equal grade; all class courses in elocution shall have been completed and such private lessons taken as the individual need of the student may have required.

Any five courses from the following list may be offered as electives for the bachelor's degree in the College of Arts and Sciences:

1. Principles of Elocution. A study of vocal organs and muscles; methods of breathing; vocal culture for purity, strength, compass, flexibility, and sustaining power; study and application of vocal elements,—form, degree, stress, quality; first principles of action.
Fall, 2:00; Winter, 3:30; Professor NEIL, 14 M.

2. Principles of Elocution. Vocal culture continued; study and drill in the vocal elements; pitch, degree, change, melody, time, quantity, pause, movement; completion of principles of action; analysis, preparation, and rendition of selections; criticism of application of elements. Spring, 2:00; Winter, 3:30; Professor NEIL, 14 M.

3. **Literary Analysis and Rendition.** Development of individuality in voice and action; lectures on analysis, mind concentration, memory, scene building, and interpretation; individual study of selections from every style; rendition of prescribed selections and criticism by members of class and instructor.

Spring, 3:30; Professor NEIL, 14 M.

4. **History of Oratory.** A philosophical survey of the origin and the history of the oration; a study of the leading orators of the various periods; analysis by each student of the noted speeches of different times and countries; class reviews of the style, diction, depth, clearness, climax, and persuasive power of the orators studied.

Fall, 3:30; Professor NEIL, 14 M.

5. **Original Orations.** Lectures on styles of address, kinds of discourse, construction of speeches, ancient, mediaeval, and modern oratory, and the sources of eloquence; preparation and delivery of topical speeches and original orations.

Winter, 9:30; Professor NEIL, 14 M.

6. **Argumentation and Debate.** Lectures on extempore speaking, principles of debate, preparation of briefs, arrangement of argument, team work, and rebuttal; extempore speeches and debates required of every student. Fall, 10:30; Professor NEIL, 14 M.

7. **Advanced Argumentation and Debate.** Continuation of course 6. The object of this course is to give the student a mastery over the perplexing technicalities of argumentative laws, to develop a clear, direct, forceful, and persuasive style of speaking, and to perfect the art of team debating. Winter, 10:30; Professor NEIL, 14 M.

8. **Vocal Interpretation of Shakespeare.** Lectures on the psychological setting of characters, plot, and purpose of one of Shakespeare's plays; study, interpretation, and memoriter rendition of the same play. Spring, 10:30; Professor NEIL, 14 M.

9. **Vocal Interpretation of the Bible.** The object of this course is to teach the student the literary worth of the Bible, its narrative, didactic, allegorical, dramatic, oratorical, lyric, and epic spirit. This is accomplished through the vocal rendition of Biblical selections.

Spring, 3:00; Professor NEIL, 14 M.

10. **University Debate.** This course is required of all students who have been chosen to represent the University in the intercollegiate contests in debate. It gives a thorough training in forensic

oratory. Winter, hour to be arranged; Professor NEIL, 14 M.

NOTE:—All classes meet three times a week—on Mondays, Wednesdays, and Fridays. In courses 1, 2, 3, and 4, the class period is one and one-half hours. In the other courses the class period is one hour. Sufficient work is required in each course for a full course credit.

Private Lessons

In addition to the class work in elocution, a thorough and comprehensive course of individual instruction is offered. Each lesson occupies a full one-hour period, and is devoted to a single individual. This branch of the work is indispensable to all who wish to follow any line of public speaking. The instruction may be taken either as single lessons or in courses of one college term each.

Tuition for Private Lessons

Single Lesson	$ 2.50
Per college term, 1 a week	20.00
Per college term, 2 a week	35.00

FINE ARTS

Associate Professor LEONARD

Credit will be given in the College of Arts and Sciences for not more than five courses in fine arts. In case credit is asked for the maximum number of courses, these must include the courses in the history of art.

1. **Elementary Drawing.** The historic forms of art and their development. Lectures, with collateral reading and practice in drawing. Fall, 9:30; L.

2. **Elementary Drawing.** A continuation of course 1. Winter, 9:30; L.

3. **Elementary Drawing.** A continuation of course 2. Spring, 9:30; L.

4. **Advanced Drawing.** Historic periods of architecture, sculpture, and painting. Lectures, with collateral reading and practice in drawing. Fall, 10:30; L.

5. **Advanced Drawing.** A continuation of course 4.
Winter, 10:30; L.

6. **Advanced Drawing.** A continuation of course 5.
Spring, 10:30; L

7. **The History of Greek Art,** with a consideration of the arts of Egypt, Assyria, and Phoenicia, in their relation to Greek art.
Fall, 8:30; L.

8. **The History of Mediaeval and Modern Art,** with special consideration of the Renaissance period. Winter, 8:30; L.

Courses 7 and 8 are not elective for freshmen.

GEOLOGY AND MINERALOGY

Professor BROWN, Dr. GRIMSLEY, and Mr. POST

The equipment for purposes of illustrative teaching in this subject consists of many thousands of fossils, casts, and models, a good collection of minerals, specimens of all the important building stones, and Ward's College Collection in Paleontology, showing the advancement from the early forms of life to those of the present time. The University is situated in the midst of a great coal-producing region, within five miles of the western fold of the Appalachian mountains, and oil and gas wells are but a short distance away. The natural facilities for the study of geology are unsurpassed.

1. **Meteorology.** Man and nature; the economic products of the earth; meteorological instruments and methods. Davis's Physical Geography. Prerequisites, Physical Geography and Physics 1.
Spring, 10:30; Mr. POST, 30 S.

2. **General Geology.** A general course in dynamic and structural geology; economic applications of geology will receive special attention; numerous excursions will be made; recitations, lectures, and field work. Le Conte's Elements of Geology. Prerequisites, Chemistry 1, 2, Physics 2.
Fall, 11:30; Spring, 10:30; Professor BROWN, 30 S.

3. **Paleontology.** The progress and development of plants and animals through the different ages of the earth; recitations and lectures. For illustration in this subject the University has an equipment of many thousands of fossils, casts, and models. Le Conte's Elements of Geology. Prerequisites, Zoology 1 and Botany 2.
Winter, 11:30; Professor BROWN, 30 S.

4. **Economic Geology.** Common rock and vein-forming minerals; physical geography and geology of the United States; the origin of ore deposits; mining terms and methods; metalliferous deposits; recitations and lectures. Ries's Elements of Economic Geology. Prerequisite, Geology 3.

Fall, 10:30; Spring, 11:30; Professor BROWN, 30 S.

5. **Economic Geology.** The fuels—coal, oil, and natural gas—soils, clays, fertilizers, precious stones, and building stones; recitations and lectures. Ries's Elements, and Merrill's Stones for Building and Decoration. Winter, 10:30; Professor BROWN, 30 S.

6. **Mineralogy.** Crystallography; physical qualities of minerals; description of minerals consisting of basic elements to the silicates; recitations, lectures, and practical determinations. The University has a good collection of minerals for practical instruction. Moses's Elements of Mineralogy.

Fall, 8:30; Spring, 9:30; Professor BROWN, 30 S.

7. **Mineralogy.** The silicates and hydrocarbon compounds and their determination. Moses's Elements of Mineralogy.

Winter, 8:30; Professor BROWN, 30 S.

8. **Economic Geology of West Virginia.** A study of the occurrence, origin, distribution, and methods of working the economic materials of the stratified rocks of West Virginia, as limes, cements, salt, gypsum, coals, clays, oil and gas, building stone, iron ores; lectures and recitations. This course is intended for all students interested in the knowledge of the mineral wealth of this country, and especially the developed and undeveloped mineral wealth of West Virginia. Reference books: Reports of West Virginia Geological Survey. Winter, 10:30; Dr. GRIMSLEY, L.

GERMANIC LANGUAGES AND LITERATURE

Professor TRUSCOTT and Mr. BAUMGARTNER

NOTE:—The text-books named in the following courses may be changed at any time, but the grade and character of the work outlined in each will remain the same.

Students taking German as a major will be expected to take as collateral work three courses in Anglo-Saxon and three courses in the history of Germany.

1. **Elementary German.** The object of the course is to acquaint

the student with the elements of the grammar, to give him a reading knowledge of the easiest German prose, and as much practice as possible in pronunciation. Vos', or Thomas' Grammar; Super's German Reader, Part I, or Tuckerman's German Reader.

Fall, first section, 9:30; Mr. BAUMGARTNER; second section, 10:30; Mr. BAUMGARTNER. Winter, 11:30; Professor TRUSCOTT, 18 W. Summer, 8:00; Professor TRUSCOTT, 18 W.

2. Elementary German. A continuation of course 1; reading of easy prose and poetry; several poems will be memorized. Elementary work in composition. Super's Reader; Lechner's Legends of German Heroes; Geibler's Deutsche Sagen; Bierwirth's German Exercises.

Winter, first section, 9:30; Mr. BAUMGARTNER; second section, 10:30; Mr. BAUMGARTNER. Spring, 11:30; Professor TRUSCOTT, 18 W.

3. Elementary German. A continuation of course 2; reading, dictation, elementary work in composition, accompanied by a review of the main points of the grammar; Immensee; Hoeher als die Kirche; L'Arrabiata; Bierwirth's German Exercises.

Fall, 11:30; Professor TRUSCOTT; Spring, first section, 9:30; second section, 10:30; Mr. BAUMGARTNER, 19 W.

4. German Prose. Rapid reading of prose by modern authors to familiarize the student with the more general phases of the language. Fall, 8:30; Mr. BAUMGARTNER, 19 W.

5. Composition. Translation of English prose into German; discussion of grammatical points in connection with the translation; dictation; study of the irregular verbs. Pope's Prose Composition; Thomas' Grammar, Part II. Winter, 8:30; Mr. BAUMGARTNER, 19 W. Summer, 9:00; Professor TRUSCOTT, 19 W.

6. German Poetry. Translation of one long poem and one drama; reading of many and memorizing of several well-known poems. Hermann und Dorothea; Die Jungfrau von Orleans; Klenze's Deutsche Gedichte. Spring, 8:30; Mr. BAUMGARTNER, 19 W.

7. Advanced Prose. Reading of descriptive and narrative prose. Selections from the works of Ludwig, Storm, Keller, Meyer, and Sudermann. Fall, 8:30; Professor TRUSCOTT, 18 W.

8. Advanced Composition. Dictation; oral practice based on Bronson's Colloquial German; Jagemann's Prose Composition. Winter, 8:30; Professor TRUSCOTT, 18 W.

9. **Heine.** Study of his life; reading from his prose and poetry; Reisebilder; Die romantische Schule; Das Buch der Lieder.
Spring, 8:30; Professor TRUSCOTT, 18 W.

10. **Lessing.** Biography by Rolleston. The following plays will be read: Miss Sara Sampson, Minna von Barnhelm, Emilia Galotti, Nathan der Weise. Lectures on the works not read in class.
Fall, 9:30; Professor TRUSCOTT, 18 W.

11. **Goethe.** Study of his life; reading of Werther's Leiden; Iphigenie auf Tauris or Tasso; Faust, Part I.
Winter, 9:30; Professor TRUSCOTT, 18 W.

12. **Schiller.** Study of his life; reading of Don Carlos; Wallenstein; Wilhelm Tell. Spring, 9:30; Professor TRUSCOTT, 18 W.

13. **History of German Literature.** From early times to 1500. This course is a study of the history of the literature, its beginnings and development, and lays stress upon the most important authors and the chief epochs. Reading and discussion of representative works. Selections from Das Nibelungenlied, das Gudrunslied, and the works of Hartmann von Aue, Wolfram von Eschenbach, Gottfried von Strassburg, and Walther von der Vogelweide. Kluge's History of German Literature. Practice in writing German. Three meetings of class each week. Full course credit. Omitted in 1909-10.
Fall, 10:30; Professor TRUSCOTT, 18 W.

14. **History of German Literature.** From 1500 to 1800. Continuation of course 13. Selections from the works of Luther, Klopstock, Wieland, and Herder. Lessing, Goethe, and Schiller not considered. Kluge's History of German Literature. Practice in writing German. Three meetings of class each week. Full course credit. Omitted in 1909-10. Winter, 10:30; Professor TRUSCOTT, 18 W.

15. **History of German Literature.** From 1800 to 1900. Continuation of course 14. Selections from the works of Kleist, Grillparzer, Uhland, Hebbel, Ludwig, Keller, Meyer, Freytag, Wildenbruch, Sudermann, and Hauptmann. Heine not considered. Meyer's Geschichte der deutschen Litteratur im neunzehnten Jahrhundert. Practice in writing German. Three meetings of class each week. Full course credit. Omitted in 1909-10. Spring, 10:30; Professor TRUSCOTT, 18 W.

16. **Scientific German.** Intended for students in the scientific courses who have had at least a year of elementary German. The

purpose is to teach the students to read at sight scientific articles in German. Hodges' German Science Reader; Cohn's Ueber Bakterien. Omitted in 1909-10. Winter, 11:30; Mr. BAUMGARTNER, 19 W.

17. **Journalistic German.** Newspaper and magazine articles on various subjects. Prehn's Journalistic German; Lodeman's Germany and the Germans; New Yorker Staatszeitung. Omitted in 1909-10.
Spring, 11:30; Mr. BAUMGARTNER, 19 W.

18. **Historical German.** A reading course in historical prose. Subjects taken from the political and literary history of Germany. Schrakamp's Erzaehlungen aus der deutschen Geschichte; Kostyak's Deutschland und die Deutschen; Schoenfeld's German Historical Prose; Freytag's Karl der Grosse. Prerequisite, three courses of German. Winter, 11:30; Mr. BAUMGARTNER, 19 W.

19. **German Comedies.** Three popular comedies will be studied: Lessing's Minna von Barnhelm; Gutzkow's Zopf und Schwert; Freytag's Die Journalisten. Composition once a week throughout the course. Prerequisite, four courses of German.
Spring, 11:30; Mr. BAUMGARTNER, 19 W.
Summer, 10:00; Professor TRUSCOTT, 19 W.

20. **Middle High German. Grammar.** Bachman's Mittelhochdeutsches Lesebuch. Readings and translation into modern German of selections from Das Nibelungenlied; Der arme Heinrich; Walter von der Vogelweide. History of the literature.

Two or three times a week throughout the year at an hour to be arranged. Professor TRUSCOTT, 18 W.

23. **The German Dramatists of the First Half of the Nineteenth Century.** Kleist and Grillparzer. Practice in writing German. Three meetings of the class each week. One course credit.
Fall, 10:30; Professor TRUSCOTT, 18 W.

24. **The Poems of Goethe and Schiller.** The poems are studied in connection with the lives and literary development of the authors.
Winter, 10:30; Professor TRUSCOTT, 18 W.

25. **Advanced Historical Prose.** Selections from German historians, essayists and critics. Practice in writing German.
Spring, 10:30; Professor TRUSCOTT, 18 W.

GREEK LANGUAGE AND LITERATURE

Professor GREEN and an assistant

1. **White's First Greek Book (Chapters I-XL).** This course is for beginners. The work covers pronunciation, accent, declensions and conjugations, etymology of words, and simple translations from Greek into English and from English into Greek to illustrate the principles of grammar as given in the text.

Fall, 9:30; (————————), 7 M.

2. **White's First Greek Book (Completed).** A continuation of course 1; much attention is paid to the vocabulary; daily exercises in sight reading. The first book of the Anabasis is read in connection with courses 1 and 2. Prerequisite, Greek 1.

Winter, 9:30; (————————), 7 M.

3. **Xenophon's Anabasis (Books II., III., and IV.).** Prose composition; a fuller knowledge of the grammar. Prerequisite, Greek 1 and 2. Goodwin's Xenophon's Anabasis; Goodwin's Greek Grammar; Pearson's Greek Prose Composition.

Spring, 9:30; (————————), 7 M.

4. **Select Readings.** Selections from the works of Xenophon and Herodotus; continued sight reading; review of Greek accidence and further study of syntax. Fall, 10:30; Professor GREEN, 30 L.

5. **Lysias' Orations.** Given alternately with Greek 7. A study of the form of Greek orations and Lysias' style; collateral library work assigned to each student; sight reading. Prerequisites, Greek 1, 2, 3, and 4, or their equivalent.

Winter, 10:30; Professor GREEN, 30 L.

6. **Homer's Iliad or Odyssey (Books I., II., and III.) and Homeric Verse.** All the text is read metrically. Etymology, mythology, and prosody are studied in connection with the text. Seymour's Iliad. Collateral reading: Jebb's Introduction to Homer; Gladstone's Time and Place of Homer. Prerequisites, Greek 1, 2, 3, 4, 5.

Spring, 10:30; Professor GREEN, 30 L.

7. **Lucian's Shorter Dialogues.** Given alternately with Greek 5. The Dialogues of the Dead and other short dialogues are read. Selections from Lucian by Williams. Omitted in 1909-10.

Winter, 10:30; Professor GREEN, 30 L.

8. Aeschines Against Ctesiphon. The aggressions of Philip of Macedon; the political institutions of Greece and the constitution of Athens are studied in connection with the text. Aeschines against Ctesiphon, by Richardson. Fall, 9:30; Professor GREEN, 30 L.

9. Plato's Apology and Crito. A study of Athenian methods of judicial procedure and criminal jurisprudence accompany the reading of the Apology. Dyer's Apology and Crito.
Fall, 11:30; Professor GREEN, 30 L.

10. Greek Literature in English Translation. Lectures tracing the development of artistic forms of literary expression among the Greeks. Some of the masterpieces of Greek literature are read in standard English translations. Frequent written reports by members of the class upon assigned readings. This course is intended for mature students of considerable experience in the study of language and literature, but no knowledge of the Greek language is required. Capps' Homer to Theocritus. Collateral reading; Jebb's Greek Literature, Mahaffey's History of Greek Literature. Special attention is given to epic and melic poetry and the choral ode.
Fall, 8:30; Professor GREEN, 30 L.

11. Greek Literature in English Translation. A continuation of course 10, but deals especially with the drama and the development of literary prose. Winter, 8:30; Professor GREEN, 30 L.

12. Myths and Legends. A study of those myths and legends upon which a large number of ancient and modern classics are based and to which frequent reference is made in English literature. No knowledge of the Greek language is necessary. Prerequisite for major credit, Greek 5 or 7. Guerber's Myths of Greece and Rome.
Spring, 8:30; Professor GREEN, 30 L.

13. Aristophanes. The reading of one or more of the plays will be supplemented by lectures on the development of Greek comedy, and the influence of the comic drama upon social and political life at Athens. Winter, 11:30; Professor GREEN, 30 L.

14. Euripides. One or more of the tragedies will be translated in class. Other plays by the same author will be read before the class by the instructor or studied by members of the class with the aid of standard translations. Incidental study of Greek metric.
Fall, hour to be arranged; Professor GREEN, 30 L.

15. Demosthenes on the Crown. Stress is laid on correct use

of synonyms, Greek rhetoric, and oratory; frequent sight translations. Demosthenes on the Crown, by Goodwin.

Winter, 9:30; Professor GREEN, 30 L

16. Aeschylus' Prometheus Bound. History of the development of dramatic art among the Greeks; study of the adaptation of epic and lyric forms to the purpose of the drama; much attention is given to the metrical system of the lyric passages. Allen's Prometheus Bound of Aeschylus.

Winter, hour to be arranged; Professor GREEN, 30 L.

17. The Antigone of Sophocles. A study of the Greek trilogy; lectures on the Greek theatre. D'Ooge's Antigone of Sophocles.

Spring, 11:30; Professor GREEN, 30 L.

18. New Testament Greek. A comparative study of the synoptic gospels. In the translation, pure, idiomatic English of the twentieth century is required. Westcott and Hort.

Spring, 9:30; Professor GREEN, 30 L.

19. Selected Odes of Pindar. Much attention is given to a practical mastery of the form. The poems are read rhythmically with the purpose of developing an appreciation of their lyrical excellence. Seymour's Odes of Pindar.

Spring, hour to be arranged; Professor GREEN, 30 L.

20. Seminar in Greek. Papers and discussions on assigned topics; large opportunities for original investigation and specialization. For graduate students and those well advanced in their college course, who desire to become specialists in this department. Credit is given for one-third of a course each quarter, or more, if the work accomplished justifies it.

Fall, Winter, and Spring, bi-weekly, 2:00-4:00; Professor GREEN, 30 L.

HISTORY AND POLITICAL SCIENCE

Professor CALLAHAN and Professor CHITWOOD

The work offered in this department includes: (1) Continental European History, (2) English History, (3) American History, and (4) Political Science.

Instruction is given by lectures, text-book work, assigned collateral readings; preparation of papers, syllabi, and maps; special reports, recitations, and informal conferences.

Students are encouraged to observe and to read contemporary history and politics.

An association of those who are especially interested in the work of the department meets fortnightly for part of the year to hear the discussion of special topics and current problems.

An afternoon hour is designated for conferences and for direction of library work.

Continental European History

Professor CHITWOOD

Students who select continental European history as their principal study are advised to take at least one year in French, or German, in the early part of the University course.

Among the books of reference, which every student will often need to consult, are Ploetz's Epitome of Universal History and some good historical atlas, such as Putzger's Historischer Schul-Atlas.

9. History of Oriental Civilization. This is a general culture course, and a fitting introduction to the study of history. It begins with a survey of primitive society and traces the rise and development of human institutions. It directs especial attention to the early institutional history of China, Japan, India, Chaldea, Assyria, and Egypt, gives a survey of their contributions to civilization, and traces the development and influence of contact with the civilization of the west. It closes with a sketch of Hebrew history, an institutional study of the Bible and of the organization of the Christian Church. Omitted in 1909-10. Fall, 11:30; 22 W.

10. History of Greece. In this course the central idea is the development of civilized life as expressed in art, literature, and philosophy, in personal character and social customs, as well as in political ideas and institutions. An attempt will be made to gain an appreciation of what the Greeks were and what they gave to civilization. Winter, 8:30; 22 W.

11. History of Rome. A sketch of the Roman republic with special reference to the expansion of the Roman power, and an intensive study of the empire. The aim in this course is to trace the development of Roman institutions, character, and civilization, to explain the genius of the Roman people for organization and government, and to call attention to the contributions of Rome to modern civilization. Spring, 8:30; 22 W.

12. Mediaeval History. This course begins with the period of institutional chaos following the breakup of the Roman empire, and ends with the rise of modern states. Special attention is devoted to the three prime factors in the history of the middle ages,—the surviving civilization of Rome, the Christian church, and the German people. Political history, except in the case of France, is subordinated to the study of social and economic institutions—the church, feudalism, the crusades, schools and learning, commerce, and the rise of cities. Fall, 10:30; 22 W.

13. The Renaissance and the Reformation; 1300-1648. A transition from mediaeval to modern history. The development of the forces of modern civilization. Beginning with the survey of the economic, political, and intellectual conditions at the close of the middle ages, this course gives the student general knowledge of the rise and decline of the papal hierarchy, the renaissance in Italy and Germany, the protestant revolution in the principal European states, the counter-reformation, and the religious wars to the Treaty of Westphalia. Winter, 10:30; 22 W.

14. Continental European History since 1648. This course covers the rise of Prussia, the period of French ascendency, the revolutionary and Napoleonic eras, the period of reaction, the unification of Germany and Italy, and the progress of democracy in the nineteenth century. Spring, 10:30; 22 W.

In courses 12, 13, 14, special emphasis is given in alternate years to the history of France, or Germany.

15. Continental Europe in the Nineteenth Century. This course is devoted to an intensive study of political and social conditions in the more important states of Europe during the last hundred years. Somewhat extended reading is required of students taking this course, and the results of this reading is presented in the form of papers and reports. Fall, 8:30; 22 W.

16. Seminar in European History. For advanced history students only. Spring, 2:00; 22 W.

English History

Professor CALLAHAN

Students will find it convenient to own Low and Pulling's Dictionary of English History and Gardiner's Atlas.

17. History of England to the Tudors. A course in the general and institutional history of England. Special attention is given to political, economic, and social life and development; the more important subjects in constitutional history are considered, showing how England learned to govern herself. This course and courses 18 or 19 and 20 furnish a good foundation for the study of American history. Fall, 10:30; 4 M.

18. History of England from the Tudors to the Present Time. A continuation of course 17. The upbuilding of the British Empire and adjustment to new conditions. The constitutional and religious struggles of the sixteenth and seventeenth centuries; economic and social changes; international relations; development of a sea power; struggle for colonial and commercial supremacy; and the formation of modern conditions and institutions. Winter, 10:30; 4 M.

19. English Social and Industrial History. A survey of the facts of social and industrial evolution and their relation to political history and the interpretation of present conditions; a study of the enlargement of English life and the growth of English institutions. Spring, 10:30; 4 M.

20. English Historical and Practical Politics: English Constitutional Law and History. A seminar course arranged especially for advanced students in history. Prerequisite, a general outline knowledge of English history and course 17 or 18.
Term and hour to be arranged; 4 M.

American History

Professor CALLAHAN

All students of American history should have Channing and Hart's Guide, and McCoun's Historical Geography of the United States.

21. American Colonial History (1492-1776). European background of American history; the economic and political conditions in Europe before the search for new trade routes; the evolution of discovery and settlement; Spanish colonial problems, policy, and progress; the growth of the English settlements into colonies; the origin and development of American institutions; views of colonial social and economic life; French colonial policy; the conflict be-

tween the English and new France; relation of the colonies to England; the gradual adaptation of European civilization to American conditions; the separation of the colonies from the mother country. Fall, 9:30; 4 M.

22. **The Formation of the Union: American Political History (1776-1829).** The revolution, the critical period, the formation of the constitution, the organization of the government, the struggle for neutrality and the development of nationality, the expansion of the Union, and the triumph of democracy. Special attention is given to political and constitutional development and to international relations, but industrial and social growth is also treated. Winter, 9:30; 4 M.

23. **Division and Reunion: American Political History Since 1829.** Economic questions and the slavery contest; the growth of sectional differences, culminating in the secession movement; the Civil War and its problems, the overthrow of the slave power, and readjustment; a brief survey of the political and social questions since the Civil War, and of the development of the resources of the country. Spring, 9:30; 4 M.

In courses 21, 22, and 23, while special emphasis is laid on political and constitutional history, much attention is given to social and economic conditions.

26. **History of American Diplomacy and Foreign Policy (1776-1909).** A general survey of the negotiations, treaties, arbitrations, congresses, etc., to which the United States has been a party; the fundamental principles of American policy; a study of the most important phases of American international relations; America's influence on international law and diplomacy; the state department and its most distinguished secretaries. See also Political Science 37. Winter, 11:30; 4 M.

27. **The Making of American History as Influenced by Geographical Conditions.** A combination of the materials of American history and geography. Influence of physiography upon American history. Summer, hour to be arranged; 4 M.

29. **American Social and Economic History.** The story of the economic achievements of the virile American people. The study forms a historical basis that is essential to a thorough understanding of political history, and the study of economics. Beginning with the exploration and settlement that led to colonization, the student

traces the growth and expansion of manufactures, agriculture, commerce, transportation, population, and labor from the simple agricultural communities of the colonies to the complex industrial and commercial organization of to-day. He learns how to acquire the information which is a necessary preliminary for the solution of present day industrial, financial, and commercial problems.

Spring, 11:30; 4 M.
One-half course. Summer, 8:00; 4 M.

30. The American Revolution and the Making of the Constitution (1775-1789). The controversy between the colonies and England; the political philosophy of the period; the state constitutions; the Continental Congress; the formation and defects of the Articles of Confederation; the "critical period"; and the evolution of the American constitution. Careful study is given to the debates in the constitutional convention of 1787 and the political discussions of the period. A seminar course. Term and hour to be arranged; 4 M.

32. History of West Virginia. Co-operative investigations in social, economic, political and constitutional development; state legislation is studied as far as possible from documentary material; considerable attention is given to railroad development and the growth of towns; an effort is made to collect historical material from different parts of the state. A seminar course.

Spring; 4 M. and Library.

33. Historical Bibliography and Method. A library and "historical" conference course on the materials of American history, the principles and tools of historical study, and the methods of teaching history with special reference to the work of the secondary schools. Sources; local collections and contemporary historical literature; authorities and text-books; use of books and the selection of libraries; books for teachers and for students (biographies, source readers, etc.); pedagogical aids and devices; historical cartography and other illustrative material; bibliographies, syllabi, and plans for note taking. Prerequisite, courses 21, 22 or 23.

Summer, twice a week, besides daily individual conferences, 8:30; 4 M. and Library.

34. Seminar in American History. A research course supplemented by lectures. Exclusively for students taking history as their major. Among the subjects recently studied were the Monroe doctrine, relations of the United States with Spanish America, and the American Cuban policy. Students are required to take notes,

to investigate assigned topics, and to become acquainted with the original materials that are accessible. Proper attention is given to scientific methods of historical research, construction, and interpretation. Theses in American history are prepared in connection with this work. Fall, 11:30; Library.

The attention of students taking American History is invited to the announcement of the Bryan prize on page 42.

Political Science

In all these courses, students should have a clear knowledge of the outlines of general history and especially of modern political history. For the advanced courses they are also expected to have a reading knowledge of German or French.

35. American Practical Politics: The Government at work. A practical study of the actual workings of the government and politics of the United States, both state and national; the growth, spirit, machinery, operations, and functions of the government, the relations, rights and duties of citizens, the policies of state on public questions and problems. Special attention is given to the realities of governments and institutions, and to the personal interest and personal action which underlie constitutions and statutes.

Open to students who have a familiar knowledge of American history, especially the period covered by courses 22 and 23. (See also courses 20 and 30).

Winter or Spring, 11:30; Professor CALLAHAN, 4 M.
One-half course. Summer, 10:00; Professor CALLAHAN, 4 M.

36. European Historical and Practical Politics. A historical study of the development of the political institutions, constitutional governments, and parties of Continental Europe; a comparative study of Greek, Roman, and Teutonic polity, and of the governments and parties of the leading countries of modern Europe. Special attention is given to recent European politics. Open to advanced students who have had thorough courses in European history, especially course 14. Omitted in 1909-10.

Fall, 2:00; Professor CHITWOOD, 22 W.

37. Contemporary International Politics.

Professor CALLAHAN, 4 M.

38. Science of Government.

Professor CALLAHAN, 4 M.

NOTE:—Courses 37 and 38 are open only to graduate students in history, or to seniors with history as their major.

LATIN LANGUAGE AND LITERATURE

Professor F. B. TROTTER, Professor HARE, and Professor DOUTHAT

The courses in this department are arranged by subjects and are not intended to be taken consecutively. Courses 10, 11, and 17 are required of candidates for the A.B. degree unless they elect Greek. In addition to these, courses 12, 13, 14, and 34 are required of all students who make Latin their major. After the completion of these courses, such other courses will be open to students as, in the opinion of the instructors, they are qualified to enter. Students making Latin their major are required to take as collateral work History 10 and 11. (See page 85).

6. Cicero's Orations against Catiline, I, II, and III.
Spring, 9:30; Professor HARE, 11 M.

7. Cicero's Fourth Oration against Catiline, the Oration for Archias, and the Aeneid of Virgil (Book 1).
Fall, 9:30; Professor HARE, 11 M.

8. Virgil's Aeneid (Books II, III, and IV).
Winter, 9:30; Professor HARE, 11 M.

9. Virgil's Aeneid (Books IV, V, and VI).
Spring, 9:30; Professor HARE, 11 M.

Latin Composition is required once a week in courses 7, 8, and 9.

NOTE:—Courses 6, 7, 8, and 9 may be counted as either preparatory or college work, but are prerequisite to the following courses.

10. Cicero's De Amicitia and De Senectute, with study of synonyms. Fall, 9:30; Professor TROTTER, 21 W.
One-half course. Summer, 11:00; 21 W.

11. Horace's Odes and Epodes, with scanning.
Spring, 9:30; Professor TROTTER, 21 W.

12. Horace's Epistles, with scanning.
Spring, 8:30; Professor TROTTER, 21 W.

13. **Cicero's De Officiis or Tusculan Disputations,** with study of synonyms. Co-ordinate with course 5 in Philosophy.
Fall, 8:30; Professor TROTTER, 21 W.

14. **Seneca's Moral Essays,** with a study of his times. Co-ordinate with course 5 in Philosophy.
Winter, 8:30; Professor TROTTER, 21 W.

15. **Lucretius' De Rerum Natura,** with a study of his doctrines.
Spring, hour to be arranged; Professor TROTTER, 21 W.

16. **Cicero's Letters,** with a study of the great orator's times.
Fall, hour to be arranged; Professor TROTTER, 21 W.

17. **Livy, Books XXI and XXII,** with a study of Roman history, or, if thought advisable, Sallust and other selections from history. Co-ordinate with course 11 in History.
Winter, 9:30; Professor TROTTER, 21 W
One-half course. Summer, 11:00; 21 W.

18. **Tacitus' Germania and Agricola, or Historiae or Annales,** with a study of the early Empire.
Spring, 10:30; Professor TROTTER, 21 W.

19. **Plautus' Captivi, Trinummus, and Rudens,** with a study of the Roman stage. Fall, 11:30; Professor TROTTER, 21 W.

20. **Terence's Adelphoe, Phormio and Heauton Timoreumenos,** with study of Greek and Roman drama.
Winter, 11:30; Professor TROTTER, 21 W.

21. **Seneca's Medea, Hercules Furens, and Oedipus,** with study of tragedy in translation from Greek into Latin.
Spring, 11:30; Professor TROTTER, 21 W.

22. **Horace's Satires,** with a study of his times.
Fall, hour to be arranged; Professor TROTTER, 21 W.

23. **Juvenal's Satires,** with a study of contemporaneous history.
Winter, hour to be arranged; Professor TROTTER, 21 W.

24. **Seneca's Apokolokuntosis, and Petronius' Cena Trimalchionis,** with study of Nero's times.
Spring, hour to be arranged; Professor TROTTER, 21 W.

31. **Cicero's De Oratore or Brutus.**
Fall, 10:30; Professor TROTTER, 21 W.

32. **Quintilian's Institutions, Books X and XII.**
Winter, hour to be arranged; Professor TROTTER, 21 W.

33. **Tacitus' Dialogus and Horace's Ars Poetica.**
Spring, hour to be arranged; Professor TROTTER, 21 W.

34. **Latin Composition.** Gildersleeve & Lodge's Latin Writer or an equivalent text is used. Careful study and review of grammar.
Winter, 10:30; Professor TROTTER, 21 W.

NOTE:—All the above courses will be offered for students properly qualified, but not more than twelve in any one year.

Philology

Professor DOUTHAT

41. **Synonyms** from Caesar, Vergil, Cicero, Horace, Livy, Tacitus, etc. Open to students who have had twelve courses in Latin.
Spring, hour to be arranged; 21 W.

42. **Synoptic Lectures** on Roman subjects. Open to students who have had nine courses of Latin. Half-course.
Spring, Thursday, 7:00 P. M.; 21 W.

43. **Classical Philology.** Open to those who have had twelve courses of Latin and three of Greek.
Spring, hour to be arranged; 21 W.

44. **Comparative Philology,** applied particularly to the Romance languages. Open to students who have had nine courses of Latin, three of French, and three of Spanish. Intended for those who are making modern languages their major.
Spring, hour to be arranged; 21 W.

45. **Study of Manuscripts and Inscriptions.** Open to students who have had nine courses of Latin. Half-course.
Fall, Thursday, 7:00 P. M.; 21 W.

46. **Ovid,** the storehouse of mythology. Open to students who have had twelve courses of Latin and three of Greek.
Fall, hour to be arranged; 21 W.

47. **Roman Life** in prose and verse. Open to students who have had nine courses in Latin. Fall, hour to be arranged; 21 W.

LAW

Credit will be given in the College of Arts and Sciences for three courses in this subject given in the College of Law. See page 170.

MATHEMATICS

Professor EIESLAND, Professor STEWART, and an assistant

7. Solid Geometry.
Fall, 11:30; Spring, 9:30; (————), 7 M.

8. Advanced Algebra. The following topics are considered: theory of quadratic equations, imaginaries, progressions and series, graphical algebra, solution of higher numerical equations, logarithms, indeterminate equations, permutations, and combinations.
Fall, 10:30; Winter, 11:30; Professor EIESLAND, 14 W.

9. Plane and Spherical Trigonometry.
Winter, 10:30; Spring, 11:30; Summer, 9:00; Professor EIESLAND, 14 W.

11. Plane Analytical Geometry. This course includes elementary work in curve tracing. Prerequisite, course 8. (Bailey & Woods).
Spring, 10:30; Fall, 9:30; Professor EIESLAND, 14 W.

12. Analytic Geometry of Space. Quadric surfaces. (Salmon).
Winter, 2:00; Professor EIESLAND, 14 W.

13. Determinants and Introduction to Higher Algebra (Bôcher). Prerequisite, course 8. Fall, 2:00; Professor EIESLAND, 14 W.

15. Differential and Integral Calculus. This is a continuous course through the fall and winter quarters. (Osgood).
Fall, 8:30; Winter, 11:30; Professor EIESLAND, 14 W.

16. Differential and Integral Calculus. This course is identical with number 15, continuing through the winter and spring quarters. (Osgood). Winter, 8:30; Spring, 11:30; Professor EIESLAND, 14 W.

18. Differential Equations. Total and partial differential equations with applications to physics and mechanics. (Cohen). Prerequisite, courses 15 and 16.
Spring, 2:00; Professor EIESLAND, 14 W.

The following named courses are offered at hours to be arranged:

21. **A Teacher's Course.** Brief survey of secondary mathematics from the modern view-point. Elements of Non-Euclidean Geometry.

22. **Theory of Surfaces.**

23. **Theory of Functions of a Real Variable.**

24. **Theory of Functions of a Complex Variable.**

Astronomy

1. **Descriptive Astronomy.** Prerequisite, Mathematics 9.
Winter, 9:30; Professor EIESLAND, 14 W.

2. **Introduction to Practical Astronomy.** Sextant and chronometer work. Prerequisite, Astronomy 1.
Spring, 9:30; Professor EIESLAND, 14 W.

3. **Celestial Mechanics.** A beginner's course, including the problem of two bodies, and an introduction to the theory of perturbations. (Moulton). Prerequisite, Mechanics 1, 2, and 3.
Hours to be arranged; Professor EIESLAND, 14 W.

MECHANICAL ENGINEERING

Credit will be given in the College of Arts and Sciences for certain courses in this subject given in the College of Engineering. See page 129.

MECHANICS AND APPLIED MATHEMATICS

Credit will be given in the College of Arts and Sciences for certain courses in this subject given in the College of Engineering. See page 129.

MUSIC

Mr. SPENCE and Miss FOSTER

1. **Harmony.** This course is designed to be a part of the general musical education of all students in the School of Music. It is of special assistance in the study of the piano, but is of value in every department of musical work. One-third course.

2. **Harmony.** Continuation of course 1. One-third course.

3. **Harmony.** Continuation of course 2. One-third course.

4. **Counterpoint.** This course is of specific benefit to pianists and to teachers of music. Prerequisite, course 1-3 in harmony. One-third course.

5. **Counterpoint.** Continuation of course 4. One-third course.

6. **History of Music.** Knowledge of the origin and development of music is a requisite in a musical education. The course, though not extensive, is designed to acquaint the student with the fundamental and most important facts of the art. One-third course.

7. **History of Music.** Continuation of course 6. One-third course.

PHILOSOPHY

President PURINTON and Professor DEAHL

1. **Logic and Principles of Science.** A study of the processes of conception, judgment, and reasoning; nature and laws of experience, induction, and subsidiary processes, such as observation, experiment, classification, and hypothesis; inductive methods; imperfect inductions and fallacies; elements of deduction and formal logic. Recitations, lectures, and notes by the instructor, and references to standard authorities. Fall, 8:30; Professor DEAHL, 24 W.

2. **Psychology.** An introductory course devoted to the study of the states of consciousness and mental processes, with an outline of the structure and functions of the nervous system; the principles and methods of mental training and the application of psychology to education. Lectures and text-book work with experiments and seminar work in standard authors.
Fall, 9:30; President PURINTON, 10 S.

3. **Ethics.** A survey of the mental processes that control conduct; fundamentals of morality, the moral faculty, ground of obligation, moral standard, moral law, moral sanction; moral culture; practical morality; personal and social duties; a review of historical ethics. Lectures, with reference to standard text-books.
Winter, 9:30; President PURINTON, 10 S.

4. **Christian Evidence.** An outline of the historical and moral proofs concerning the Christian system; a brief comparative view of other religious systems. Spring, 9:30; President PURINTON, 10 S.

5. **History of Philosophy.** An introduction to the study of philosophy, with an outline of the history of the leading philosophers and schools, ancient, mediaeval, and modern. Lectures, with references to best standard works. Fall, 2:00; 14 S.

6. **Mediaeval Philosophy.** Especially the influence of Christianity upon philosophy and vice versa, and the rise and content of patristic philosophy. Winter, 2:00; 14 S.

PHYSICAL TRAINING

Director CHEZ and Mrs. CHEZ

The purpose of the physical department is the development or restoration of the physical well-being of students attending the University. The director examines each student and prescribes exercises for his individual need. Special attention is given to those who are constitutionally weak.

An exhibition of class and apparatus work is given each year.

Men's Department

Director CHEZ

The work is graded as much as possible to suit the needs of the students. Careful attention is given to correction of bad postural habits and to all-around development and training of the body. Drills are given in free-hand exercises, dumb-bells, Indian clubs, and wands.

Recreation in the form of games, such as basket ball, three-deep, slipper, etc., follows the regular class work. Play conduces to health, physical development, and mental relaxation; therefore, these games are encouraged after class work.

Heavy gymnastics, which includes German horse, parallel bars, horizontal and vaulting bars, tumbling, wrestling, and fencing, is given to the advanced classes. A gymnastic team is organized each year.

Women's Department

Mrs. CHEZ

The Swedish system is taught and a graded course pursued. First year students, after a careful anthropometric examination, are given developing exercises in Swedish gymnastics, together with such special work as is suited to individual needs. Following this foundation work, advanced exercises are added, which include drills with dumb bells, Indian clubs, and wands, and the Gilbert fancy steps. Athletic games, such as basket ball and field hockey, are begun the latter part of the first year and continued throughout the course. Only third and fourth year students are eligible to the Women's "Varsity" teams.

Schedule

Fall—Regular Classes:
2—3; 3—4; Monday, Wednesday, Thursday
3—4; Tuesday; Friday
Public school teachers and pupils:
9:30—10:30; 10:30—11:30; 11:30—12:30; Saturday
Winter—Regular classes:
11:30—12:30; 2—3; Monday, Wednesday, Friday
2—3; 3—4; Tuesday, Thursday
Public school teachers and pupils:
9:30—10:30; 10:30—11:30; 11:30—12:30; Saturday
Spring—Regular classes:
2—3; 3—4; Monday to Friday
Outdoor work:
4—5:30; Monday to Friday

PHYSICS

Professor HODGES and Mr. POST

The physical laboratory is equipped with the required apparatus for the presentation of every course offered in the department. The apparatus for electrical measurements and test work is especially well selected and of superior quality. It includes the latest and most improved instruments for measuring current, resistance, electromotive force, quantity, capacity, induction, etc. There is also an extensive equipment for the lecture table.

1. **Elementary Physics.** Lectures and recitations four times per week, and laboratory one period of two hours per week. Prerequisites, Algebra 3 and Plane Geometry.

Fall, 8:30; laboratory hours to be arranged; Mr. POST, 11 S.

2. **Elementary Physics.** Continuation of course 1, which is prerequisite. Division into sections as in course 1.

Winter, 8:30; laboratory hours to be arranged; Mr. POST, 11 S.

4. **Experimental Physics.** A laboratory course exclusively, consisting of elementary quantitative experiments. Open to students who do not take course 6. Sabine's Laboratory Course in Physics. Prerequisites, Physics 1 and 2, or equivalent work, and Plane Trigonometry. May be taken in the fall, winter, and spring quarters, one-third course each quarter, or full course in fall or spring.

Hours to be arranged; Professor HODGES or Mr. POST, 11 S.

6. **General Physics.** Mechanics. Lectures and recitations. Required of candidates for engineering degrees. Prerequisite, Analytical Geometry.

Fall, Monday, Wednesday, Friday, 9:30; Professor HODGES, 11 S.
Laboratory work; one or two exercises weekly; afternoon periods.
Hours to be arranged; Professor HODGES and Mr. POST, 14 S.

7. **General Physics.** A continuation of course 6. Heat, electricity, magnetism. Lectures and laboratory work.

Winter, Monday, Wednesday, Friday, 9:30; Professor HODGES, 11 S.
Laboratory work.
Hours to be arranged; Professor HODGES and Mr. POST, 14 S.

8. **General Physics.** A continuation of course 7. Sound and Light. Lectures and laboratory work.

Students who have not taken course 7 may be admitted to course 8, if they have taken course 6.

Spring, Monday, Wednesday, Friday, 9:30; Professor HODGES, 11 S.
Laboratory work.
Hours to be arranged; Professor HODGES and Mr. POST, 14 S.

10. **Agricultural Physics.** Required of agricultural students. Open to all other college students. Prerequisite, Physics 1, or equivalent work elsewhere. King's Physics of Agriculture.

Spring, 8:30; Mr. POST, 11 S.

11. **Applied Electricity.** Required for engineering degrees. Elements of the general theory of dynamos and motors, both direct and

alternating current, their construction and operation. Lectures and recitations. Prerequisite, Physics 7 and Mathematics 16.

Winter, 10:30; Professor HODGES, 11 S.

12. Applied Electricity. Required for degree of B. S. M. E. Fundamental principles, complex quantities, harmonic functions, laws of magnetic and electrical circuits, including graphical and analytical treatment of the phenomena of resistance, induction and capacity, electrical measurements. Prerequisite, Physics 11. Lectures and laboratory work.

Spring, 10:30; Professor HODGES and Mr. POST, 11 S.

15. Electrical Measurements. Advanced laboratory work. Use of measuring instruments of precision, sensitive galvanometers, apparatus for accurate measurements of resistance, current, electromotive force, induction, magnetic properties of iron, etc. Prerequisite, Physics 7 and Mathematics 16.

Hours to be arranged; Professor HODGES and Mr. POST, 14 S.

ROMANCE LANGUAGES AND LITERATURES

Assistant Professor HOLDEN and Assistant Professor STATHERS

French

1. Elementary Course. Grammar, reading, and composition. Stress is laid on the pronoun and the conjugation of the verb. Constant practice in pronunciation and oral understanding. Fraser and Spair's French Grammar; Aldrich and Foster's French Reader.

Fall, first section, 8:30; Professor STATHERS, 11 W.; second section, 9:30; Professor HOLDEN, 2 M.; third section, 11:30; Professor HOLDEN, 2 M.

2. Elementary Course. A continuation of course 1. Grammar reading, and composition, with continued practice in pronunciation and oral understanding. Fraser and Spair's French Grammar; Aldrich and Foster's French Reader.

Winter, first section, 8:30; Professor STATHERS, 11 W.; second section, 9:30; Professor HOLDEN, 2 M.; third section, 10:30; Professor HOLDEN, 2 M.

3. Elementary Course. A continuation of course 2. Grammar, reading, composition, and oral understanding. Halévy's L' Abbé Constantin or Verne's Vingt mille lieues sous les Mers.

Spring, first section, 8:30; Professor STATHERS, 11 W.; second section, 9:30; Professor HOLDEN, 2 M.; third section, 10:30; Professor HOLDEN, 2 M.

4. **Fiction of the Nineteenth Century.** Reading of Merimeé's Colomba, Balzac's Contes, and George Sand's La Petite Fadette. Composition once a week. Particular attention given to pronunciation and oral understanding.

Fall, 10:30; Professor STATHERS, 11 W.

5. **Fiction of the Nineteenth Century.** A continuation of course 4, with additional emphasis on syntax and idioms. Alphonse Daudet's Tartarin de Tarascon, Pierre Loti's Pêcheur d' Islande, and Anatole France's Le Crime de Sylvestre Bonnard. Composition as above.

Winter, 10:30; Professor STATHERS, 11 W.

6. **France and the French People of To-day.** Study of the country from a commercial and geographical standpoint; Parisian and provincial life; reading and discussion in French of magazine articles and questions of popular interest. Daily theme work and as much French conversation as practicable. Work largely based on Foncin's Le Pays de France.

Spring, 10:30; Professor STATHERS, 11 W.

7. **Classical Tragedy.** Lectures on the origin of the drama, reading of representative plays, and study of the lives of Corneille and Racine. Composition once a week.

Fall, 11:30; Professor HOLDEN, 2 M.

8. **Classical Comedy.** The work of the course centers in the life and writings of Molière. Lectures on his precursors, and critical reading of several plays. Composition once a week.

Winter, 11:30; Professor HOLDEN, 2 M.

9. **Non-Dramatic Literature of the Seventeenth Century.** Critical reading of selections from the works of Descartes, Pascal, La Bruyère, La Rochefoucauld, Bossuet, La Fontaine, and Boileau. Composition once a week. Spring, 11:30; Professor HOLDEN, 2 M.

NOTE:—When deemed expedient, any of the courses from 10 to 12 inclusive may be substituted for courses 4, 5, or 6; and any of those from 13 to 15 inclusive may replace courses 7, 8, or 9.

10. **Historical Readings.** Selections from the works of Thierry, Lamartine, Michelet, Mignet, Thiers, Guizot, Taine, and others.

Fall, 10:30; Professor STATHERS, 11 W.

11. **Drama of the Nineteenth Century.** Representative plays by Dumas, Augier, Musset, Pailleron, Scribe, Sandeau, Catulle Mendès, and Rostand. Winter, 10:30; Professor STATHERS, 11 W.

12. **French Literature of the Eighteenth Century.** Selections from Voltaire, Beaumarchais, Lesage, Montesquieu, Rousseau, André, Chénier, Diderot, and the Encyclopedists.
Spring, 10:30; Professor STATHERS, 11 W.

13. **Advanced Prose Composition.** For teachers and students desiring a larger acquaintance with the practical side of the language. Study of idioms, paraphrasing, dictation, and conversation. Chardenal's Exercises for Advanced Students, or François' Advanced French Prose Composition. Prerequisites, the first six courses in French or their equivalent. Fall, 11:30; Professor HOLDEN, 2 M.

14. **Lyric Poetry.** Critical reading of representative poems from Villon to the present time. Versification and poetic forms; lives and works of the leading poets. Special attention is given to Lamartine, Hugo, Vigny, Musset, the Parnassians, and the Symbolists.
Winter, 11:30; Professor HOLDEN, 2 M.

15. **The Romantic Movement.** The work centers in Victor Hugo and the romantic drama. Selections from Chateaubriand, Madame de Staël and Hugo's prose works.
Spring, 11:30; Professor HOLDEN, 2 M.

NOTE:—When the demand is sufficient, advanced courses are offered qualified students as follows:

16. **Literary Criticism in France.** The Nineteenth century especially, studied in the works of Sainte Beuve, Lemaître, Faguet, Taine, and Brunetière.

17. **Literature of the Sixteenth Century.** Selections from Rabelais, Marot, and Montaigne; Ronsard and the Pléiade; Darmesteter and Hatzfeld, Le Seizième Siècle en France.

18. **Old French Readings.** Inflection, derivation and syntax. Paris et Langlois: Chrestomathie du Moyen Age; Paris: Extraits de la Chanson de Roland.

19. **Old French Readings and Phonetics.** A continuation of course 18. Bartsch and Horning's La Langue et la Littérature françaises depuis le neuvième siècle jusqu' au quatorzième siècle. Development of phonetic laws in transition from Latin to French.

Spanish

Assistant Professor STATHERS

The following courses have in view both the study of literature and the application of the language to commercial uses and conversation. The close relations of our country with those of Spanish America necessitate the study of Spanish as a living and not as a dead language. Hence, while due attention is given to the rich literature of Spain, full opportunities are offered to acquire a practical knowledge of the language.

1. **Elementary Course.** Grammar and reading, with practice in prounciation, composition, and oral understanding. Loiseaux' Elementary Spanish Grammar and Ramsey's Elementary Spanish Reader.

2. **Intermediate Spanish.** Grammar, oral exercises, easy conversation, and select readings from contemporary authors. Loiseaux' Elementary Spanish Grammar and Fontaine's Flores de España.

Winter, 9:30; 11 W.

3. **Modern Fiction.** Study of two or three works to be selected from the following: Perez-Galdós' Doña Perfecta and Marianela; Valdés' José and La Alegriá del Capitán Ribot; Valera's El Pájaro Verde; Alarcón's El Capitán Veneno and El Niño de la Bóla.

Spring, 9:30; 11 W.

4. **Modern Drama.** Careful study of Perez-Galdós' Electra, Nuñez del Arce's El Haz de Leña, and Moratín's El Sí de las Niñas. Composition once a week throughout the course, with special emphasis on syntax and idioms. Loiseaux' Spanish Composition.

Fall, 11:30; 11 W.

5. **Commercial Spanish and Current Magazine Literature.** Business correspondence and commercial terms; conversation in Spanish on topics relating to travel, daily life, and questions of present interest; reading selected from Spanish newspapers and magazine articles of the day; essays and advanced composition.

Winter, 11:30; 11 W.

6. **Classic Drama and the Age of Cervantes.** Critical reading of Lope de Vega's La Estrella de Sevilla, Calderón's La Vida es Sueño, and extracts from Cervantes' Don Quixote de la Mancha. Papers on the lives, works, and times of these authors.

Spring, 11:30; 11 W.

Italian

Assistant Professor HOLDEN.

It is desirable that students beginning Italian should have some knowledge of Latin.

1. **Elementary Course.** Pronunciation, elementary grammar, easy reading, composition, and oral understanding. Grandgent's Italian Grammar; Bowen's Italian Reader. Fall, 8:30; 2 M.

2. **Elementary Course.** A continuation of course 1. Grammar, reading, dictation, and composition, with continued practice in pronunciation and oral understanding. Grandgent's Italian Grammar; Bowen's Italian Reader. Winter, 8:30; 2 M.

3. **Elementary Course.** A continuation of course 2. Grandgent's Italian Grammar; Manzoni's I Promessi Sposi. Spring, 8:30; 2 M.

4. **Readings In Modern Italian.** Selected from the works of Pellico, Amicis, Farina, Del Testa, Barrilli, Serao, and Verga. Grandgent's Italian Composition.

5. **Italian Drama of the Eighteenth Century.** Selected plays of Metastasio, Alfieri, and Goldoni. Composition.

6. **Introduction to the Study of Dante.** Selections from La Vita Nuova and La Divina Commedia.

NOTE:—When the demand is sufficient, courses 4, 5, and 6 may be given instead of courses 1, 2, and 3.

ZOOLOGY

Professor REESE

The courses in this department are intended to serve as a means of general culture and to prepare students to become investigators and teachers of zoology. A wide field is offered for valuable investigations in the organization, functions, habits, and evolution of animal life. Upon the results of such investigations rest to a large extent the sciences of medicine, psychology, and sociology. Courses 1, 2, 3, and 10 are of especial interest to teachers. Courses 1, 2, 3, 6, and 7 are required of students in the six-year medical course.

1. Animal Biology. A study of invertebrate animals. The study of structure is conducted with constant reference to function and adaptation, and the student performs simple experiments on the behavior of protozoa, hydra, earthworm, etc. The lectures deal with the structure and physiology of the cell, reproduction, symbiosis, commensalism, etc. Three lectures and four hours laboratory work per week.

Fall, Monday, Wednesday, and Friday, 8:30; 17 W.

2. Vertebrate Zoology. Dissection of the dogfish, perch, mudpuppy or frog, turtle and cat; lectures on the biology, comparative anatomy, and evolution of vertebrates. Two lectures and six hours laboratory work per week.

Winter, Monday and Wednesday, 8:30; Laboratory, Tuesday, Wednesday, and Thursday, 1:30; 17 W.

3. Vertebrate Zoology. Continuation of course 2.

Spring, Monday and Wednesday, 8:30; Laboratory, Tuesday, Wednesday, and Thursday, 1:30; 17 W.

6. Vertebrate Embryology. Cleavage, gastrulation and the formation of the germ layers are studied in the frog and the chick, the development of organs in the chick and the pig. These materials are supplemented by serial sections, dissections, and cleared preparations of human embryos in various stages. The lectures deal chiefly with human development. Reese's Introduction to Vertebrate Embryology, 2nd edition. Prerequisites, courses 2 and 3, or an equivalent. Fall, 10:30-12:30; 17 W.

7. Vertebrate Neurology. Dissection of the central and peripheral nervous systems of several vertebrates and study of the components of the cranial nerves and the centers and fiber tracts in the brain of one or more fishes, an amphibian, a reptile, and a mammal. Burkholder's Anatomy of the Brain with additional lectures and collateral reading. Prerequisite, courses 1, 2, 3, and 6.

Spring, hour to be arranged; 17 W

9. Methods in Zoology. A practical course in the methods of collecting, hatching and rearing, preserving, injecting, and making microscopic preparations. Open to all majors in zoology who have had courses 1, 2, and 3, and to others by special permission. Credit in proportion to the work done. Fall, Winter, Spring; 17 W.

10. Principles of Biology. This course deals with the conditions of animal life and the means of adaptation. It includes the

study of habits, reactions, food relations, coloration, regeneration, etc.; the course of organic evolution; theories regarding the origin of species, heredity, etc. Lectures, demonstrations, and assigned readings. Prerequisite, course 1, or an equivalent.

Winter, hour to be arranged; 17 W.

NOTE:—Course 10 may be given at other times, if there is sufficient demand.

15. Comparative Embryology and Anatomy of Animals. Advanced course. 17 W.

16. Comparative Embryology and Anatomy of Animals. A continuation of course 15. 17 W.

19. Current Literature. The advanced students form a journal club, which meets weekly for reports and discussion of recent literature. One course credit for the year. 17 W.

20. Research Work. Properly qualified students may undertake research work upon the morphology or physiology of animals. Credit in proportion to the work done. 17 W.

NOTE:—Courses 15, 16, 19, and 20 are for graduate or other advanced students and may be taken at any time.

THE COLLEGE OF ENGINEERING AND MECHANIC ARTS

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

FREDERICK LINCOLN EMORY, M.M.E., M.E., *Professor of Mechanics and Applied Mathematics*

CLEMENT ROSS JONES, M.M.E., *Professor of Mechanical Engineering*

WILL H. BOUGHTON, C.E., *Professor of Civil Engineering*

RUSSELL LOVE MORRIS, C.E., *Professor of Civil Engineering*

HENRY MACE PAYNE, Ph.D., Sc.D., *Professor of Mining Engineering*

EDWIN FAYETTE CHURCH, Jr., M.S., *Associate Professor of Mechanical Engineering*

WILLIAM ELMORE DICKINSON, M.E.-E.E., *Associate Professor of Electrical Engineering*

RUFUS A. WEST, *Assistant in Metal Working and Stationary Engineer*

THOMAS HOWARD CATHER, *Foreman of Machine Shop*

JOHN B. GRUMBEIN, *Foreman of Wood Shop*

ALEXANDER REID WHITEHILL, Ph.D., *Professor of Chemistry*

SAMUEL B. BROWN, A.M., *Professor of Geology and Mineralogy*

THOMAS EDWARD HODGES, A.M., *Professor of Physics*

FREDERICK WILSON TRUSCOTT, Ph.D., *Professor of Germanic Languages and Literatures*

FREDERICK LAWRENCE KORTRIGHT, D.Sc., *Professor of Chemistry*

JOHN ARNDT EIESLAND, Ph.D., *Professor of Mathematics*

WILLIAM JACKSON LEONARD, *Associate Professor of Fine Arts*

CHARLES COLLIER HOLDEN, A.B., *Assistant Professor of Romance Languages*

MADISON STATHERS, Ph.D., *Assistant Professor of Romance Languages*

GEORGE PERRY GRIMSLEY, A.M., Ph.D., *Special Lecturer in Economic Geology*

WILLIAM M. BAUMGARTNER, A.B., *Instructor in German*

CLARENCE POST, A.B., *Assistant in Physics*

ORGANIZATION

This College comprises the following departments:
Civil Engineering;
Mechanical and Electrical Engineering and the Mechanic Arts;
Mining Engineering;
Mechanics and Applied Mathematics.

The requirements for admission and graduation, the arrangement of the courses of instruction, and such other work as pertains to this College, are provided for by its faculty, in conjunction with the University Council.

BUILDINGS AND EQUIPMENT

All instruction in engineering subjects is centralized in the Mechanical Hall. This building is located on the southeast corner of the campus and fronts the athletic field. It really consists of two buildings connected by covered passageways. The main building is 168½ feet long and three stories high, with a well-lighted basement running under its entire length. In this building are the lecture, recitation, drawing, and instruction rooms of the various engineering departments, the machine and woodworking shops, and the mechanical and electrical laboratories. The rear building, known as the power plant, is one story in height and contains the boiler and engine rooms, the forge shop, the foundry, and the sheet metal

and pipe fitting shop. The drawing rooms, shops, power plant, and laboratories are equipped with modern apparatus and machinery for practical and experimental work.

In the drawing rooms are collections of models of bridges, furnaces, structures, mechanisms, engines, pumps, valves and valve gears; descriptive geometry models; sets of charts, state and government maps, surveys, photographs, engineering specifications, drawings, tracings, and blue prints. In connection with the drawing rooms there is a blue printing and photographic room and dark closet, equipped with electric and sun printing apparatus and photographic outfit.

The shops consist of a woodworking shop, forge shop, foundry, machine shop, and sheet metal and pipe fitting shop. Each work shop occupies a separate room and is independently equipped with suitable benches, measuring instruments, tools, shop appliances, and machines, such as are ordinarily installed in the larger engineering colleges and commercial shops. These afford ample facilities for performing all the fundamental operations in machine construction and for building machines of moderate size.

The power plant equipment consists of different types of steam and gas engines, direct-connected or belted to electric generators, steam boilers, equipped for burning both gas and coal, an independently fired superheater, pumps, condensers, air compressors, steam traps and other auxiliary apparatus, providing the means for furnishing any desired kind of power. The power for the shops and laboratories is ordinarily obtained from a 50 H. P. Westinghouse two-cylinder gas engine, direct-connected to a 37½ K. W. Westinghouse direct-current generator, from which it is distributed to motors or other apparatus, but this can be increased by operating independently, or in parallel, one or more additional machines driven by steam engines, or by a rotary converter connected with the city mains. Single and two-phase alternating current may be obtained from city mains, and one, two, and three-phase current may be developed by a double-current dynamo driven as an inverse converter or as an alternating current dynamo.

The Engineering laboratories are fitted with standard gauges, measuring, calculating, and recording instruments; apparatus and appliances for qualitative and quantitative experimental work in civil, mechanical, steam, hydraulic, electrical and mining engineering.

The testing laboratory is equipped with apparatus and machines for testing cement, iron, steel, brick, stone, and other materials of engineering. The principal machines and apparatus are an Olsen testing machine of 400,000 pounds capacity, taking tension and com-

pression specimens up to six feet, and beams up to sixteen feet in length; a 50,000-pound Riehle testing machine; a 20,000-pound Riehle automatic and autographic testing machine; a 10,000-pound Olsen transverse testing machine; a 60,000 inch-pound Riehle-Miller torsion machine; two Fairbanks cement testers; a standard abrasion cylinder; besides smaller apparatus for testing cement, lubricating oils, and extension and deflection of materials.

The mechanical and steam laboratories contain small steam and gas engines, a compound air compressor with electric and mechanical control, Westinghouse air brake apparatus, rotary air motors, a hot air engine, a small vertical steam boiler, a direct steam driven ventilating fan, dynamometers, friction brakes, condensers, injectors and ejectors, steam and gas engine indicators, revolution counters, planimeters, anemometers and apparatus for testing pressure gauges, indicator springs, thermometers, flow of steam and air through nozzles, etc. This is supplemented by the power plant equipment previously described, which affords facilities for steam and gas engine trials and boiler tests with larger units, and also provides facilities for various lines of experimental investigation.

The electrical laboratory is provided with a number of small compound-shunt and series-wound direct-current generators and motors, ranging from 2½ to 10-kilowatt; two and three-phase alternating current generators and motors of frequencies from 20 to 133 cycles, and capacities ranging from 2 to 10-kilowatt; rotary converter and motor generator sets; an 8-horse-power variable speed Stow motor, driving a 5-kilowatt, 2-phase, 220-volt, 10 pole, alternator, which may give any frequency from 40 to 133 cycles; a 3-horse-power inter-pole motor; a 3-horse-power Thompson-Ryan variable-speed motor, which, driving a small alternator, affords frequencies from 15 to 60 cycles; a 5-horse-power Lammé series single-phase motor; a 3-horse-power self-starting, Century, single-phase induction motor; a 5-horse-power General Electric, single-phase motor; a 10-horse-power Stanley 2-phase induction motor, equipped with compensator, condensers, and transformers; various types of Cutler-Hammer and other speed regulating and controlling apparatus; static, auto and constant-current transformers; a welding transformer; a high potential transformer for testing insulation, etc.; a Thodarson set of experimental apparatus for demonstrating any of the principles of electricity; a Queen & Co.'s testing set, with standards of capacity, induction and resistance, and with a potentiometer and standard cell, for standardizing electrical instruments; a General Electric oscillograph with accessories; standard and commercial in-

dicating and recording measuring instruments; synchronism and power-factor indicators; dynamometers; permeameters; galvanometers; tachometers and speed counters; rheostats of various types and capacities; and four distributing panels of switchboard. The photometric and the storage battery equipments of the department of physics are also available in connection with the above.

The hydraulic laboratory equipment consists of a compound duplex steam pump supplying water to a closed steel pressure tank, from which run headers arranged for the insertion of orifices, nozzles, and pipes supplying the various hydraulic motors; concrete storage tanks; measuring tanks and weighing scales; Cascade water wheel, Venturi meter, water meters, steel weir-box, weir-gauges, and other minor measuring and controlling apparatus.

The passenger locomotive donated by the Baltimore & Ohio Railroad Company furnishes a nucleus for instruction in railway engineering.

The Ingersoll-Rand and Sullivan Machinery Companies have each recently furnished the department of mining engineering with a compressed air mining machine and also with a rock drill and tripod mounting, complete.

The Jeffrey Manufacturing Company has also furnished the department with a complete electric chain coal cutting machine and an electric rotary drill with truck and mountaings, and tools, and an assortment of lantern slides illustrating the various phases of the uses and the manufacture of mining machinery.

Transits, levels, compasses, etc., are provided for the use of students in land and mine surveying and in highway and railway construction.

The latest trade literature, catalogues, and reports of commercial developments in engineering are kept in classified files for students' reference. The University library has a thoroughly classified and indexed collection of the standard and latest books in engineering and the allied sciences, complete bound sets of the transactions of several scientific and engineering societies, and current issues and bound volumes of the principal scientific and technical periodicals.

METHODS OF INSTRUCTION

In the class-room, instruction is given by lectures, combined with text-book study and recitation. Engineering problems and subjects are assigned to be worked out in the library or drawing-room, in the field, the shop, or the laboratory. Visits of inspection to industrial establishments and power plants are made whenever it is possible to arrange for them.

This method of instruction in manual training and the mechanic arts is to assign in the beginning a few carefully selected exercises by which the student is familiarized with the fundamental operations of constructive mechanics. Later, such instruction is combined with the work of constructing machine elements, tools, and apparatus.

In engineering drawing and designing, the work is carried along with the study of actual typical details of structural elements or with related practical and experimental work in the laboratories and mechanical shops. Frequent reference is made to models, to blue prints of engineering structures, and to existing work in the institution or elsewhere. An opportunity is also afforded for the necessary graphical treatment of engineering problems arising in lectures and the class-room instruction.

In experimental engineering, the students are required to make scientific observations, keep records of tests, facilitate deductions therefrom by the use of calculating instruments, tabulate and plot results, and make reports upon the test in due form. Each member of the class is required to use and to become familiar with all the instruments and apparatus of any given course. The classes are divided into groups of two or three students and furnished with mimeographed notes and forms.

Lectures, field practice, mimeographed notes, collateral reading, conference work, and sketching, accompany all the practical lines of work.

ENGINEERING SOCIETY

The Engineering Society is organized in connection with the Engineering departments. It is conducted by the students of these departments, and meets once in two weeks. Its object is the investigation and discussion of scientific subjects. All engineering students are requested to join this organization and perform such work as its rules require. Students taking any of the four-year courses leading to the baccalaureate degrees in engineering are expected to engage actively for three years in the work of the society.

ENGINEERING COURSES OFFERED IN THIS COLLEGE

REGULAR UNDERGRADUATE COURSES

1. A four-year course leading to the degree of Bachelor of Science in Civil Engineering.
2. A four-year course leading to the degree of Bachelor of Science in Mechanical Engineering.
3. A four-year course in electrical engineering leading to the degree of Bachelor of Science in Mechanical Engineering.
4. A four-year course leading to the degree of Bachelor of Science in Engineering of Mines.

GRADUATE COURSES

1. A course leading to the degree of Civil Engineer.
2. A course leading to the degree of Mechanical Engineer.
3. A course leading to the degree of Electrical Engineer.

SPECIAL COURSES

1. Groups of elective courses for students in other colleges taking work in engineering subjects.
2. Special courses in civil, mechanical, electrical, and mining engineering, for students who do not desire an engineering degree.
3. Special courses in manual training for teachers.
4. Special courses in the mechanic arts for artisans, mechanics, apprentices, stationary engineers, electricians, etc.

Note:—The purpose of the undergraduate engineering courses is to give the student a broad foundation for his professional career. Only a limited amount of specialization is considered wise. The study of English and other modern languages, the leading sciences, and especially mathematics and mechanics, prepares the student for the technical subjects of the course. In the latter subjects instruction in the theoretical principles involved is supplemented by field practice or work in the laboratory, shop, and drafting room. The work for a degree is nearly all prescribed, but candidates have an opportunity for a limited amount of specialization before graduation. For full particulars see statements of requirements for each degree.

REQUIREMENTS FOR ADMISSION TO ENGINEERING COURSES

ADMISSION TO REGULAR COURSES

The subjects and number of units in each required for admission to the regular four-year engineering courses are as follows:

English	3
Modern languages	2
Algebra	1½
Plane and solid geometry	1½
Physics with laboratory	1
Chemistry with laboratory	1
History	1
Free hand drawing	1
Elective	2
Total	14

The following substitutions may be made:

1. One unit in ancient language for one unit in modern language.

2. College work in French, German, geology, mechanic arts, or mechanical drawing which is prescribed work for an engineering degree may be offered for entrance instead of an equivalent amount of preparatory work in physics, chemistry, free-hand drawing, or modern language. In such case the preparatory work for which substitution is made must be taken as college work in the freshman year.

3. Solid geometry may be taken as college work when trigonometry has been offered for entrance.

For a detailed statement of the above units, see page 48.

ADMISSION TO SPECIAL COURSES

Students desiring to take special courses in the College of Engineering and Mechanic Arts are required to conform to the general regulations of the University regarding special students. (See page 35). Such students must give satisfactory evidence that

they are prepared to take the desired studies advantageously; but if they subsequently desire to become candidates for a degree, or to take a regular course in engineering, they must pass the required entrance examination for that year.

ADMISSION TO ADVANCED STANDING

Students from other institutions admitted to advanced standing will be classified on the same basis as students of this University, namely:

A student to be classified as a freshman must not be more than one unit behind his class; to be classified as a sophomore, junior, or senior, he must have completed the required work of his course, including entrance examinations, up to the beginning of the preceding year; and, if a sophomore, must not be more than three courses, or, if a junior, or senior, not more than two courses behind his class.

No student can be admitted as a candidate for any of the baccalaureate degrees in engineering after the beginning of the fourth year.

Students in the College of Engineering are permitted to apply for advanced standing for not more than two courses for work done in the following subjects during vacation or other periods of absence from the University:

Civil Engineering

Subject	*Course credit*
Drawing 1, 9, 10, and 11	4
Thesis 21	1

Mechanical Engineering

Woodworking 1 and 3	1 1-5
Foundry 7	2-5
Forging 5	2-5
Tinsmithing and pipe fitting 9	2-5
Machine shop 10 to 13	1 3-5
Machine construction 14 and 15	4-5
Electrical construction 17 and 18	4-5
Mechanical drawing 20 to 23	1 3-5
Machine drawing 30	2-5

Cards for advanced standing in the above courses will be issued by the chairman of the committee on classification and grades without further action by the committee, provided that the applica-

tion for the advanced standing card shall be made before the work is done, or within one week after the student's return to the University from vacation or other absence.

THESES

Every candidate for a baccalaureate or graduate degree in engineering will be required to prepare a thesis on some subject relating to a special branch of engineering or other department of applied science. The thesis must be either a design or a review of some machine, structure, or process, belonging to some department of scientific investigation. It must be fully elaborated and accompanied by the necessary working drawings or models required for the proper elucidation of the subject of the thesis. With its accompanying drawings it will be presented for approval, first to the instructor under whose guidance it has been prepared, then to the head of the department in which the degree is to be conferred. A typewritten copy of the thesis, prepared according to official specifications for theses, and signed by the instructor in charge and the head of the department, must be placed in the University library before graduation.

The credit value of the thesis is one course.

UNDERGRADUATE COURSE IN CIVIL ENGINEERING

This is a four-year course leading to the degree of Bachelor of Science in Civil Engineering. It has been planned with a view to laying a broad and substantial foundation for the general and technical knowledge needed by practitioners in civil engineering.

Requirements for the degree of Bachelor of Science in Civil Engineering:

Subject	*Course numbers*	*Course credits*
Mathematics:—		
Trigonometry	9	1
Higher algebra	8	1
Analytic geometry	11	1
Differential calculus	15	1
Integral calculus	16	1
Language:—		
German, French or Spanish		3
Chemistry:—		
Analytic chemistry	4, 5, 7	1

Geology:—		
General geology	2	1
Economic geology	4	1
Mineralogy	6	1
Physics:—		
General physics	6, 7, 8	3
Applied electricity	11	1
Mechanics and applied mathematics:—		
Statics	2	1
Kinetics	3	1
Strength of materials	4	1
Power	5, 6	2
Mechanical engineering:—		
Woodworking	1	1
Testing laboratory	70, 71, 72	1
Civil engineering:—		
Drawing	1, 9, 10, 11	4
Descriptive geometry	2, 3	2
Land surveying	4	1
Railroad surveying	5	1
Topographical surveying	6	1
Railroad construction	7	1
Roads, streets, and pavements	8	1
Hydraulics	12	1
Stereotomy	13	1
Stresses in roofs and bridges	14, 15	2
Bridge design	16	1
Municipal and sanitary engineering	17	3-5
Economic railroad location	18	1
Masonry construction	19	1
General engineering construction	20	1
Thesis	21	1
Contracts and specifications	23	2-5
Total		44

Students who wish to specialize along the lines of chemistry, physics, mining engineering, hydraulics, structural design or electrical engineering, will be allowed to do so, under the following conditions: no substitution or election will be allowed before the beginning of the third year; any student desiring so to specialize must prepare a list of the studies he wishes to substitute or elect, and a scheme of the work proposed, which must be approved by the head of the department and the committee on classification and grades, and filed with the registrar.

DISTRIBUTION OF THE WORK FOR THE DEGREE OF B.S.C.E.

Each subject is followed by its department number and, if a fractional course, by its credit value.

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	German 4 (See Note 1)	German 5	German 6
9:30	Proj. Drawing 1	Drawing 9	Land Surveying 4
10:30	Univ. Algebra 8	Trigonometry 9	Anal. Geometry 11
11:30	Geology 2		Geology 4
1:30	Woodworking 1, 1-3	Woodworking 1, 1-3	Woodworking 1, 1-3

Second Year

8:30	Diff. Calculus 15	Int. Calculus 16	Mechanics 2
9:30	Physics 6	Physics 7	Physics 8
10:30	Physics 6, Lab. Tu. and Th.	Physics 7, Lab. Tu. and Th.	Physics 8, Lab. Tu. and Th.
			Top. Sur. 6, M., W., and F.
11:30	Descrip. Geom. 2	Descrip. Geom. 3	
1:30	Anal. Chem. 4, 1-3 Tu. and Th.	Anal. Chem. 5, 1-3 Tu. and Th.	Anal. Chem. 7, 1-3 Tu. and Th.
			Surveying 6, W. and F.
2:00	Draw. 10, 1-2	Draw. 10, 1-2	

Third Year

8:30	R. R. Surveying 5	R. R. Construction 7	
9:30	Mechanics 3	Mechanics 4	Mineralogy 6
10:30	Stereotomy 13	Physics 11	Rds. & Pavements 8
11:30			Masonry Const. 19
2:00	Draw. 11, 1-2 M., W., and F.	Draw. 11, 1-2 M., W., and F.	
Sat.	Mech. Lab. 70, 1-3	Power Meas. 71, 1-3	Testing Mat. 72, 1-3

Fourth Year

8:30	Power 5	Power 6	Hydraulics 12 (See Note 2)
9:30			Eng. Const. 20
10:30	Roofs and Bridges 14	Roofs & Bridges 15	
11:30	Mun. and San. Eng. 17 Contracts and Spec. 23	Bridge Design 16	Econ. R. R. Loca. 18
2:00		Bridge Design 16	

Thesis throughout the year.

Note 1:—Students are expected to take three courses of French, German, or Spanish as college work. The three taken may be any for which they are prepared. Those who enter with credit for three courses of German may take second-year German as scheduled above Others may take their language work as they can arrange it.

Note 2:—Students who expect to take their thesis subject in hydraulics should take Hydraulics 12 in the third year instead of the fourth, as scheduled.

UNDERGRADUATE COURSE IN MECHANICAL AND ELECTRICAL ENGINEERING

The following four-year courses leading to the degree of Bachelor of Science in Mechanical Engineering are offered:

1. **Mechanical Engineering.** For the benefit of those wishing to specialize in machine design, machinery and mill work, or other mechanical engineering subjects, an optional or alternative course for the fourth year is provided.

2. **Electrical Engineering.** The first two years of both the mechanical and electrical courses are the same, the differentiation beginning in the winter term of the third year.

Both of these courses have much in common, and in accordance with the custom of leading engineering schools, no distinction is made in the degree which is given. Any graduate who so desires may receive, in addition to his degree, a certified statement of the course which he pursued.

These courses are planned to prepare the student for intelligent work involving the design, selection, cost, construction, installation, testing and management of power generators, prime movers, and machinery for manufacturing, transportation and power transmission; the planning, equipment, cost, construction, and management of manufacturing plants, shops and factories; lighting, heating and ventilating.

The degree of Bachelor of Science in Mechanical Engineering will be conferred upon any student who satisfies all entrance requirements, and satisfactorily completes the following thirty-six required college courses, and eight courses selected from one of the elective groups given below:—

REQUIRED COURSES

Subject	*Course numbers*	*Course credits*	
Language:—			
French, German, or Spanish		3	
Mathematics:—			
Trigonometry	9	1	
Advanced algebra	8	1	
Analytic geometry	11	1	
Differential calculus	15	1	
Integral calculus	16	1	
Chemistry:—			
Analytic chemistry	4, 5, 7	1	
Geology:—			
General geology	2	1	
Physics:—			
General physics	6, 7, 8	3	
Mechanics and applied mathematics:—			
Development and utilization of power	5, 6	2	5
Analytic mechanics	2, 3	2	
Strength of materials	4	1	
Civil engineering:—			
Descriptive geometry	2	1	2
Land surveying	4	1	
Mechanical engineering:—			
Mechanic arts:			
Woodworking	1, 3	1 1-5	5
Foundry	7	3-5	
Forging	5	2-5	
Tin smithing and pipe fitting	9	2-5	
Machine shop	10, 11, 12, 13	1 3-5	
Machine construction	14, 15		
or Electrical construction	17, 18	4-5	
Mechanical drawing and machine design:			
Mechanical drawing	20, 21, 22	1 1-5	5 3-5
Mechanism and machinery	24, 26	1 1-5	
Mechanism (drawing)	25, 27	4-5	
Valves and valve gears	28	3-5	
Valve gears (drawing)	29	2-5	
Machine drawing	30, 32	4-5	
Machine design	31	3-5	

Steam engineering:—			
Thermodynamics	40	1	2 1-5
Heat engines and motors	41	3-5	
Power plant design	43	3-5	
Experimental engineering:—			
Mechanical laboratory	70	1-3	2 1-5
Power measurement	71	1-3	
Testing materials	72	1-3	
Mechanical engineering: Laboratory	73, 74, 75	1 1-5	
Thesis			1
Total			36

GROUPS OF ELECTIVE COURSES

Mechanical—Regular

Subject	*Course numbers*	*Course credits*
Mechanical engineering:—		
Steam engine design	34	3-5
Steam boilers	42	3-5
Drawing and designing	35, 36, 37	1 4-5
Civil engineering:—		
Hydraulics	12	4-5
Electrical engineering:—		
Electrical distribution	55	3-5
Power transmission	54	3-5
Electric lighting and railways	56	3-5
Electrical laboratory	60, 61	4-5
Physics:—		
Applied electricity	11, 12	1 3-5
Total		8

Mechanical—Alternative

Mechanical engineering:—		
*Steam engine design	34	3-5
*Steam boilers	42	3-5
Materials of engineering	47	1
Heating and ventilating	46	1
*Machine design	33	1
Machinery and mill work	45	1
*Drawing and designing	35, 36, 37	1 4-5

Electrical engineering:—		
*Electrical engineering	66	3-5
Civil engineering:—		
Hydraulics	12	1
Any other approved course		1 or more
Mechanics and applied mathematics:—		
Any approved course		1 or more
Physics:—		
*Applied electricity	11, 12	1 3-5
Mining engineering:—		
Machinery and haulage	4	3-5
Metallurgy	11	1
Total to be selected		8

*Students selecting their elective courses from this group will be required to take the courses marked with an asterisk, unless equivalent substitutions are made with the approval of the head of the department and the committee on classification and grades.

Electrical

Electrical engineering:—		
Electrical machinery	51, 52, 53	1 3-5
Electrical distribution	55	3-5
Electric lighting and railways	56	3-5
Power transmission	54	3-5
Electrical engineering laboratory	60, 61, 62	1 1-5
Designing and drawing	57, 58, 59	1 4-5
Physics:—		
Applied electricity	11, 12	1 3-5
Total		8

Students who wish to specialize in telephone engineering will be permitted to substitute Telephone Engineering 65 for Electric Lighting and Railways 56.

DISTRIBUTION OF THE WORK FOR THE DEGREE B.S.M.E.

Each subject is followed by its department number and, if a fractional course, by its credit value.

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	German 4	German 5	German 6
9:30			Land Surveying 4
10:30	Algebra 8	Trigonometry 9	Anal. Geom. 11
11:30	Geology 2		
1:00	Mech. Draw. 20 2-5 W. and F.	Mech. Drawing 21, 2-5 W. and F.	Mech. Drawing 22 2-5 W. and F.
1:00	Woodwk'g 1, 3-5 T., Th., and 8:00 S.	Pattern-making 3, 3-5 Tu., Th., and S.	Foundry 7, 3-5 Tu., Th., and S.

Second Year

8:30	Differential Calculus 15	Integral Calc'us 16	Mechanics 2
9:30	Physics 6	Physics 7	Physics 8
10:30		Mechanism 24, 3-5 M., W., and F.	Mechanism 26, 3-5 M., W., and F.
11:30	Descriptive Geom. 2		
1:30	Anal. Chem. 4, 1-3 Tu. and Th.	Anal. Chemistry 5, 1-3 Tu. and Th.	Anal. Chem. 7, 1-3 Tu. and Th.
1:00	Mech. Draw. 23, 1-3 F. (elective)	Mechanism 25, 2-5 W. and F.	Mechanism 27, 2-5 W. and F.
1:00	Forging 5, 2-5 M. and 8:00 S.	Tin & Pipe Work 9, 2-5 M. and S.	Machine Work 10 2-5 M. and S.

Third Year (Mechanical)

8:30	Power 5	Power 6	Thermodynamics 40
9:30	Mechanics 3	Mechanics 4	Mach. Design 31, 3-5 M., W., & F.
10:30	Valves and Valve Gr's 28., M., W., and F.	Physics 11, 3-5 M., W., and F.	Physics 12
11:30			
1:00	Mach. Work 11, 2-5 M. and F.	Machine Work 12, 2-5 M. and F.	Mach. Work 13, 2-5 M. and F.
1:00	Valve Gears 29 2-5 Tu. and Th.	Machine Draw'g 30, 2-5 Tu. and Th.	Mach. Drawing 32, 2-5 Tu. and Th.
8:00	Mech. Lab. 70, 1-3 S.	Power Measure 71, 1-3 S.	Testing Mater. 72, 1-3 S.

Fourth Year (Mechanical)

8:30	Heat Engines 41, 3-5 M., W., & F. Engineering Lab. 73, 2-5 Tu. or Th. Elect. Lab. 60, 2-5 Tu. or Th.	Power Plt. Des. 43, 3-5 M., W., & F. Eng'g Lab. 74, 2-5 Tu. or Th. Elect. Lab. 61, 2-5 Tu. or Th.	Hydraulics 12, 4-5 Eng'g Lab. 75, 2-5, Tu. or Th.
9:30	Steam Eng. Des. 34, 3-5 M., W., & F.	Steam Boil's 42, 3-5 M., W., and F.	Elect. Light'g 56, 3-5 M., W., & F.
10:30	Elect. Trans. 54, 3-5 M., W., & F.	Elect. Dist. 55, M., W., and F.	Thesis Conference, M., W., and F.
1:00	Draw. and Des. 35, 3-5 Tu., Th., and F. Mach. Const. 14, 2-5 M. and W.	Draw. and Des. 36, 3-5 Tu., Th., & F. Mach. Const. 15, 2-5 M. and W.	Draw. and Des. 37, 3-5 Tu., Th., & F.

Fourth Year (Mechanical Alternative)

Candidates for the degree of B.S.M.E. may select their elective studies from the mechanical alternative group of electives, but such elective courses must be taken at the time for which they are announced in the catalogue. The required courses must be taken as scheduled above.

Third Year (Electrical)

8:30	Power 5	Power 6	Thermodynamics 40
9:30	Mechanics 3	Mechanics 4	Mach. Design 31, 3-5 M., W., & F.
10:30	Valves and Valve Gr's 28, 3-5 M., W., & F.	Ap'd Electricity 11, 3-5 M., W., & F.	Ap'd Electricity 12
11:30			
1:00	Mach. Work 11, 2-5 M. and F.	Mach. Work 12, 2-5 M. and F.	Mach. Work 13, 2-5 M. and F.
1:00	Valve Gears 29 2-5 Tu. and Th.	Mach. Draw'g 30, 2-5 Tu. and Th.	Mach. Drawing 32, 2-5 Tu. and Th.
8:00	Mech. Lab. 70, 1-3 S.	Power Measure 71, 1-3 S.	Testing Mater. 72, 1-3 S.

Fourth Year (Electrical)

8:30	Heat Engs. 41, 3-5 M., W., and F.	Power Plant Des. 43 3-5 M., W., and F.	Thesis Conference M. W., and F.
	Eng'g Lab. 73, 2-5 Tu. or Th.	Eng'g Lab. 74, 2-5 Tu. or Th.	Eng'g Lab. 75, 2-5 Tu. or Th.
	Elect. Lab. 60, 2-5 Tu. or Th.	Elect. Lab. 61, 2-5 Tu. or Th.	Elect. Lab. 62, 2-5 Tu. or Th.
9:30	Elect. Mach'y 51, 3-5 M., W., and F.	Elect. Mach. 52, 3-5 M., W., and F.	Elect. Light'g 56, 3-5 M., W., & F.
10:30	Elect. Trans. 54, 3-5 M., W., and F.	Elect. Dist. 55, 3-5 M., W., & F.	Elect. Mach. 53, 2-5 W. and F.
1:00	Des. and Draw. 57, 3-5 Tu., Th., and F.	Des. & Draw. 58, 3-5 Tu., Th. & F.	Des. & Draw. 59, Tu., Th., & F.
	Elect. Const. 17, 2-5 M. and W.	Elect. Const. 18, 2-5 M. and W.	

UNDERGRADUATE COURSE IN MINING ENGINEERING

This is a four-year course leading to the degree of Bachelor of Science in Engineering of Mines.

The object of the course is to prepare young men to take responsible positions in connection with the mining development of the state. The exact requirements for the degree will be modified from time to time to suit conditions.

The degree of Bachelor of Science in Engineering of Mines will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes the following forty-four courses:

Subject	*Course numbers*	*Course credits*
Languages:		
French, German, or Spanish		3
Mathematics:		
Trigonometry	9	1
Advanced algebra	8	1
Analytic geometry	11	1
Differential calculus	15	1
Integral calculus	16	1
Chemistry:		
Analytic chemistry	4, 5, 7	1
Quantitative analysis	9, 10	1

Geology:		
General geology	2	1
*Paleontology	3	1
Economic geology	8	1
Mineralogy	6	1
Physics:		
General physics	6, 7, 8	3
Applied electricity	11	1
Mechanics and applied mathematics:		
Analytic mechanics	2, 3	2
Strength of materials	4	1
Development and utilization of power	5	1
Civil engineering:		
Drawing	10, 11	2
Descriptive geometry	2	1
Land surveying	4	1
Masonry construction	19	1
Roofs and bridges	14	1
Hydraulics	12	4-5
Mechanical engineering:		
Mechanical drawing	20, 21, 22	1 1-5
Woodworking	1	2-5
Forging	5	2-5
Machine work	10	2-5
Mechanical laboratory	70, 71, 72	1
Engineering laboratory	73, 74	4-5
Thermodynamics	40	1
Heat engines	41	3-5
Power plant design	43	3-5
Electricity for mining engineers	66	1

*Geology 4 may be substituted for Geology 3.

Mining engineering:		
Mine surveying	1	1
Mine surveying	2	1
Shaft sinking, excavating & tunneling	3	3-5
Mining machinery & haulage systems	4	3-5
Mine design	5, 6	4-5
Mine drawing and design	7, 8, 9	1 2-5
Mine operation	10	2-5
Metallurgy	11	3-5
Clays, limestones and cement	12	2-5
Thesis		1
Total		44

A student wishing to specialize in geology, mineralogy, chemistry, or some special engineering subject, may with the consent of his class officer and the committee on classification and grades, substitute an equivalent number of courses in one or more of these subjects for Heat Engines 41 and Masonry Construction 19.

DISTRIBUTION OF THE WORK FOR THE DEGREE OF B.S.E.M.

Each subject is followed by the department number, and the credit value of fractional courses is given.

Hour	Fall	Winter	Spring
		First Year	
8:30	German 4	German 5	German 6
9:30			Land Surveying 4
10:30	Algebra 8	Trigonometry 9	Anal. Geom. 11
11:30	Geology 2	Geology 3	
1:00	Mech. Draw. 20, 2-5 W. and F.	Mech. Draw. 21, 2-5 W. and F.	Mech. Draw. 22, 2-5 W. and F.
1:00	Woodwk'g 1, 2-5 Tu., Th., & 8:00 S.	Forging 5, 2-5 Tu., Th., and S.	Machine Work 10, 2-5 Tu., Th., & S.
		Second Year	
8:30	Diff. Calculus 15	Int. Calculus 16	Mechanics 2
9:30	Physics 6	Physics 7	Physics 8
10:30		Geology 8	Mine Surv. 1, M., W., and F.
11:30	Descrip. Geom. 2		
1:30	Anal. Chem. 4, 1-3 Tu. and Th.	Anal. Chem. 5, 1-3 Tu. and Th.	Anal. Chem. 7, 1-3 Tu. and Th.
			Surveying 1, W. and F.
2:00	Draw. 10, 1-2	Draw. 10, 1-2	
		Third Year	
8:30	Power 5		Thermodynamics 40
9:30	Mechanics 3	Mechanics 4	Mineralogy 7
10:30	Mine Surv. 2 M., W., and F.	Physics 11	
11:30	Mine Surv. 2, Tu. and Th.		Masonry Const. 19
1:30		Chemistry 9, 2-3 Tu. and Th.	Chemistry 10, 1-3 Tu. and Th.
2:00	Draw. 11, 1-2 M., W., and F.	Drawing 11, 1-2 M., W., and F.	
8:00	Mech. Lab. 70, 1-3 S.	Power Measure 71, 1-3 S.	Testing Mat. 72, 1-3 S.

Fourth Year

8:30	Heat Engines 41, 3-5 M., W., and F.	Power Plant Design 43, 3-5 M., W., and F.	Hydraulics 12, 4-5
	Engineering Lab. 73, 2-5 Tu. or Th.	Eng'g Lab. 74, 2-5 Tu. or Th.	
9:30	Shafting and Tunneling 3, 3-5 M., W., and F.	Mine Mach. 4, 3-5 M., W., and F.	Metallurgy 11, 3-5 M., W., and F.
	Mine Design 4, 2-5 Tu. and Th.	Mine Des. 6, 2-5 Tu. and Th.	Mine Oper. 10, 2-5 Tu. and Th.
10:30	Roofs and Bridges 14	Elect. Eng'g 66	Thesis
			Clays, etc., 12, 2-5 Tu. and Th.
1:30	Mine Drawing 7, 2-5 Tu. and Th.	Mine Draw. 8, 3-5 M., Tu., and Th.	Mine Drawing 9, 2-5 Tu. and Th.

GRADUATE COURSES IN ENGINEERING

These lead to the professional degrees of Civil Engineer, Mechanical Engineer, and Electrical Engineer, respectively. They consist of eight advanced engineering courses and a thesis, and require one year of resident study and work at the University.

A candidate for a professional degree is required to have completed the prescribed four-year course of undergraduate study in that department of this college in which he proposes to take a degree, or to have completed such a course or its equivalent at some other institution of recognized standing, conferring the same or an equivalent baccalaureate degree. In the latter case, the diploma and other certificates of proficiency should be presented.

There is no fixed curriculum of subjects for any of these degrees, but the course of study or investigation is arranged to suit the needs of each candidate, subject to the rules governing candidates for the degree of Master of Arts as stated in the announcement of the College of Arts and Sciences. Each candidate for a degree must select his major subject in the department in which his degree is to be taken and submit a thesis showing marked attainment in some phase of this subject.

SPECIAL ENGINEERING COURSES

1. Elective Groups for Students in other Colleges. Candidates for other than the engineering degrees, and special students in any department of the University, are permitted to elect subjects in the College of Engineering, provided, in each case, they have had the subjects specified as prerequisites. Students who wish to take a general classical or scientific course before taking an engineering course are advised to carry their mathematics as far as called for by the engineering course, and to take some of their elective work in the College of Engineering. The engineering instructors will advise them what is best to elect.

Credits are given in the College of Arts and Sciences for the following engineering courses:

	Course Credits
Mechanics and applied mathematics:—	
Courses 2, 3, 4, 5, 10, 11, 12	7
Civil engineering:—	
Hydraulics 12	1
Descriptive geometry 2 and 3	2
Stereotomy 13	1
Land surveying 4	1
Drawing (C.E. or M.E.)	2
Mechanical and electrical engineering:—	
Thermodynamics 40	1
Electrical machinery 51, 52, 53	2
Electrical laboratory 60 and 61	1
Mechanical laboratory 70, 71, 72	1
Heating and ventilating 46	1
Mechanical drawing (C.E. or M.E.)	2

In addition to the above a student may elect, with consent of his major instructor,

1. When his major subject is physics:—	
Mechanic arts 1-18	3
Mechanical drawing (M.E. or C.E.)	1
2. When his major subject is in education:—	
Mechanic arts 1-18	3
Mechanical drawing (M.E. or C.E.)	2

2. Partial Courses. Deserving young men who have not the time or are otherwise unable to take a full course, will be allowed to take special or partial courses, consisting of such studies as they

are prepared to take, provided that such partial courses shall have been approved by their class officers. For further information see statement of requirements for admission to special courses.

3. **Manual Training Courses.** The first group consists of courses 1, 2, 3, and 5 in mechanical engineering. The second group consists of mechanical drawing, courses 20, 21, 22, and shop practice in wood and metal working courses 1, 2, 3, 5, 7, 8, 9, and 10. These courses aim to present the simple elements of some of the constructive arts which admit of being developed into a logical series of exercises. Their merit is chiefly educational, rather than as possessing any intrinsic value in relation to the several branches of handicraft work from which they are taken. The primary object is the training of the eye to see the form of objects, and of the hand to produce such forms in the materials most commonly used in constructive work. There is sufficient instruction in handicraft work and practice to form a proper foundation for the more advanced work with machine tools in mechanical construction, and these courses are, therefore, required of all students taking the full course in mechanical engineering.

4. **Special Courses for Mechanics, etc.** Students who wish to become more proficient in the use of tools or who are preparing themselves for positions as foremen in industrial establishments, may take additional work in the shop in which they wish to specialize. Instruction will be given in the maintenance and repair of machinery, and opportunity will be afforded for the construction of new machines and apparatus for the University, as well as the working up in the shops of original designs which have been approved by the head of the department. All students in mechanical engineering are recommended to take advantage of this provision and devote as much time as possible to shop and drawing-room practice.

DEPARTMENTS OF INSTRUCTION

Each of the courses of instruction offered by the College of Engineering is known as a full course unless otherwise stated; that is, a course of five class exercises a week for one quarter, or their equivalent in laboratory or other practical work.

The following branches of applied science and engineering are represented in the courses offered by the Engineering departments:

Applied mathematics
Civil engineering
Designing
Drawing
Electrical engineering
Experimental engineering
Hydraulic engineering
Mechanics
Mechanic arts
Mechanical engineering
Metallurgy
Mining engineering
Municipal engineering
Railroad engineering
Sanitary engineering
Steam engineering
Structural engineering
Surveying

CIVIL ENGINEERING

Professor Boughton and Professor Morris

1. **Projection Drawing.** Orthographic projections in one quadrant; elementary problems in shades and shadows; isometric and oblique projections. Lectures and recitations; drawing-room work.
Fall, 9:30; Professor Morris, 30 M. H.

2. **Descriptive Geometry.** Orthographic projections in the four quadrants; problems of the point, line, and plane; tangencies and the development of single-curved surfaces.
Fall, 11:30; Professor Morris, 24 M. H.

3. **Descriptive Geometry.** Single-curved, double-curved and warped surfaces; intersections, tangencies and developments; shades, shadows and perspective. Lectures and recitations.
Winter, 11:30; Professor Morris, 24 M. H.

4. **Land Surveying.** Theory and practice of land surveying; magnetic variations; calculating the content; retracing old lines; division of lands; establishment of meridians; care and use of instruments; mapping the survey. Lectures, recitations, and field practice. Gillespie's Surveying.
Spring, 9:30; Professor Morris, 24 M. H.

5. **Railroad Surveying.** Theory and practice of railroad surveying. Lectures, recitations, and field work. Searles' Field Engineering. Fall, 8:30; Professor Morris, 24 M. H.

6. **Topographical Surveying.** Theory and practice of topographic, hydrographic, and barometric surveying. Lectures, recitations, and field practice. Prerequisite, course 4. Johnson's Theory and Practice of Surveying. Spring, 10:30; Professor BOUGHTON, 14 M. H.

7. **Railroad Construction and Maintenance.** Tunnels, trestles, track-work, earth-work, signalling, graduation, masonry, etc. Trautman's Track and Track-work.
Winter, 8:30; Professor MORRIS, 24 M. H.

8. **Roads and Pavements.** Location, construction, and maintenance; study and comparison of the various types of roads; road-making materials. Lectures, recitations, and field work.
Spring, 10:30; Professor MORRIS, 24 M. H.

9. **Drawing.** Continuation of course 1; projections, developments, and intersections; lettering. Thorne's Junior and Intermediate Courses in Drawing.
Winter, 9:30; Professor MORRIS, 30 M. H.

10. **Drawing.** Conventional methods in detail drawing and map drawing; special attention to execution and to practical lettering of working drawings. One-half course given in the fall and one-half in the winter. 2:00; Professor BOUGHTON, 30 M. H

11. **Drawing.** Continuation of course 10; examples taken from actual engineering constructions; elementary problems in design of structures. One-half course given in the fall and one-half in the winter. 2:00; Professor BOUGHTON, 30 M. H.

12. **Hydraulics.** Theoretic pressure and energy of water; flow of water through orifices and tubes and over weirs; flow in conduits, pipes, canals, and rivers; current meters, water motors, etc. Lectures and recitations. Arranged either as a full course or a four-fifths course. Spring, 8:30; Professor BOUGHTON, 14 M. H.

13. **Stereotomy.** Stone-cutting, plain and decorative. Recitation and drawing-room work. Warren's Stone Cutting.
Fall, 10:30; Professor MORRIS, 32 M. H.

14. **Stresses in Roofs and Bridges.** Determination of stresses by graphical and analytical methods. Lectures and recitations. Prerequisite, Strength of Materials.
Fall, 10:30; Professor BOUGHTON, 14 M. H.

15. **Stresses in Bridges and Arches.** Continuation of course 14. Lectures and recitations.
Winter, 10:30; Professor BOUGHTON, 14 M. H.

16. Bridge Design. Detailed designs of bridges and other structures of wood and steel. Must be preceded or accompanied by course 15. Winter, 11:30 and 2:00; Professor Boughton, 30 M. H.

17. Municipal and Sanitary Engineering. Water supply for municipalities, sewerage systems, sewerage disposal, etc. Lectures and recitations. Three-fifths course. Accompanies course 23.
Fall, 11:30; Professor Boughton, 14 M. H.

18. Economic Railroad Location. General theory of railroad location; effects of grades, curvature, and distance on operating expense and revenue; railroad finance and management.
Spring, 11:30; Professor Morris, 24 M. H.

19. Masonry Construction. As presented in Baker's Masonry Construction. Spring, 11:30; Professor Boughton, 14 M. H.

20. General Engineering Construction. Supplementary to other courses of this department. Masonry arches; solid and framed domes; built-up timber beams; trussed timber and steel beams; composite beams; reinforced concrete for beams, columns, retaining walls, arches, dams, etc.; analytical and graphical solution of roof angles and other skew connection work; improvement of rivers and harbors; relative economy of structures of different cost and life. Prerequisite, courses 7, 16, and 19.
Spring, 9:30; Professor Boughton, 14 M. H.

21. Thesis. See general description of engineering courses for thesis requirements.

22. Geodesy. Precise and geodetic surveying; reduction of observations by the method of least squares; field exercises in determining azimuth, latitude, and time. Elective course, not given regularly. Hours to be arranged; Professor Boughton, 14 M. H.

23. Contracts and Specifications. Law of contracts; writing of engineering contracts and specifications; procedure in awarding of contracts; duties of engineer or architect during construction of work under a contract. This course given only in conjunction with course 17. Two-fifths course.
Fall, 11:30; Professor Boughton, 14 M. H.

Advanced courses in hydraulics and bridge design have been given by the head of the department and will be arranged again

whenever necessary. Students who desire to specialize in this way must comply with the conditions laid down on a preceding page under the head Undergraduate Course in Civil Engineering.

NOTE:—In the several surveying courses, whether so stated in the announcement or not, there may be field practice on Friday afternoons, or at other times different from the recitation hour, as the instructor may arrange. The student should keep this in mind when selecting courses for any quarter.

MECHANICAL AND ELECTRICAL ENGINEERING AND THE MECHANIC ARTS

Professor JONES, Associate Professor CHURCH, Associate Professor DICKINSON, Mr. WEST, Mr. CATHER, and Mr. GRUMBEIN

Courses in the Mechanic Arts

1. **Woodworking.** Includes instruction in carpentry, joinery, and other bench work; exercises with the fundamental edge tools in soft and hard woods, and in matching, molding, joining, and making typical framed work; woodturning, comprising the fundamental geometric forms in soft and hard woods; fitting forms of reversed curves; face plate work, chucking, boring, finishing, and polishing. Three-fifths course, or 9 actual hours per week.

1st section; Fall, Winter, or Spring, Monday, Wednesday, and Friday, 1:00.

2nd section; Fall or Winter, Tuesday and Thursday, 1:00, and Saturday, 8:00. Mr. GRUMBEIN, 21 M. H.

2. **Woodworking.** Advanced work for special students. In this course the student is permitted to specialize along the lines of his choice. The amount of credit to be given depends upon the amount of time spent in the shop and the progress made by the student. Hours to be arranged; Mr. GRUMBEIN, 21 M. H.

3. **Pattern-Making.** Applies the foregoing instruction in its relation to patterns for machine construction, considers the types of patterns and usual allowances for draft, shrinkage and finish, with exercises in making patterns of machine elements and other work to be executed in the machine shop. Three-fifths course, or 9 hours per week.

Fall, Winter, or Spring, Tuesday and Thursday, 1:00, and Saturday, 8:00; Mr. GRUMBEIN, 21 M. H.

4. **Pattern-Making.** A continuation of course 3 for special students. Credit for this course is given on the basis of time spent in the shop and the progress of the student.

Hours to be arranged; Mr. Grumbein, 21 M. H.

5. **Forging.** Exercises in drawing out and sizing, forming, welding, and fitting iron; steel forging, tempering, annealing; making typical tools to be used later in the machine shop; manner of working forges; determining quality of iron and steel and strength of the students' welded joints. Two-fifths course, or 6 hours per week.

Sophomores; Fall, Monday, 1:00, and Saturday, 8:00; other sections, hours to be arranged; Mr. West, 7 M. H.

6. **Forging.** A continuation of course 5 for special students. Credit is given on the basis of time spent in the shop and the progress of the student. Hours to be arranged; Mr. West, 7 M. H.

7. **Foundry.** Moulding and casting in connection with pattern-making; selection, preparation, and use of molding, facing, and parting sands; use of typical molder's tools and appliances; making castings from exercise patterns and from those for machine work. Three-fifths course.

Spring, Tuesday and Thursday, 1:00, and Saturday, 8:00; Mr. West and Mr. Grumbein, 8 M. H.

8. **Foundry Practice.** A continuation of course 7 for special students. Hours to be arranged; Mr. West, 8 M. H.

9. **Tin-Smithing and Pipe-Fitting.** Brazing, tinning, forging, and use of coppers; seamless and solder-jointed work in tin and sheet iron; laying-out, cutting, and forming sheet-metal; electrical fitting; bending and coiling pipe; making joints and use of packing; drilling and tapping for pipe and bolt holes in boiler plate; soft and hard patches; tank and boiler riveting, caulking, and tube expanding. Two-fifths course, or 6 hours per week.

Winter, Monday, 1:00, and Saturday, 8:00; Mr. West, 7 M. H.

10. **Machine Work.** Tool smithing, iron work at the bench, chipping, filing, fitting, scraping, polishing; key-seating; formation of straight edges and surface plates; handwork with machine tools, drilling, tapping. Two-fifths course, or 6 hours per week.

Spring, Monday, 1:00, and Saturday, 8:00; Mr. Cather, 11 M. H.

11, 12, 13. **Machine Tool Work.** A continuation of course 10. Mechanical engineering; machine tool work with drill-press, lathe, shaper, planer, emery grinder, and milling machine; production of

typical details of machine tools and other workshop appliances. Each, two-fifths course, or six hours per week.

Fall, Winter, and Spring, Tuesday and Thursday, 1:00; Mr. CATHER, 11 M. H.

14, 15, 16. Machine Construction. Reproduction of typical details of steam-engine and other motive-power machinery; work from original designs; manufacture of special apparatus for shop and laboratory use; practice in building, assembling, and erecting workshop and engineering appliances, motive-power machinery and accessories, and attendance on the same. Each, two-fifths course, or six hours per week.

Fall, Winter, and Spring, Tuesday and Thursday, 1:00; Mr. CATHER, 11 M. H.

17, 18. Electrical Construction. Mechanical repairs to dynamos and motors and setting and adjusting brushes; constructing switches, switch boards, and rheostats; winding coils, wiring for electric light, power and telephone service. Each, two-fifths course.

Fall and Winter, Monday and Wednesday, 1:00; Professor DICKINSON and Mr. WEST, 4 M. H.

Courses in Mechanical Drawing and Machine Design

20, 21, 22. Mechanical Drawing. Plain lettering, care and use of drawing instruments, selected geometric constructions, line exercises, finished drawings; isometric, cabinet and orthographic projection, working drawings from models and blue prints, tracing, and blue printing; mimeographed notes, blue prints. Each two-fifths course, or six hours per week.

Fall, Winter, and Spring, Monday, Wednesday, and Friday, 1:00; Professor CHURCH, 25 M. H.

23. Machine Drawing. Working drawings of machine parts from sketches and models. Elective for sophomores. Prerequisite, course 21. One-third course.

Fall, Friday, 1:00; Professor CHURCH, 25 M. H.

24, 26. Mechanism and Machinery. Analysis and classification of mechanisms, diagrams of relative velocities of machine parts; principles of transmission and change of motion by linkages, rolling contact, tooth gearing, couplings, belting, cams, parallel and straight line motions; classification and analysis of machinery with special attention to workshop appliances, machine tools, and machinery of transmission. Lectures and recitations. Prerequisite, course 20, and accompanying drawing courses, 25 and 27. Each, three-fifths course.

Winter and Spring, Monday, Wednesday, and Friday, 10:30; Professor Church, 26 M. H.

25, 27. Mechanism Drawing. Practice accompanying courses 24 and 26. Drawings and diagrams of mechanical movements, graphical solution of problems; design of gear teeth. Each, two-fifths course, or six hours per week. Winter and Spring, Wednesday and Friday, 1:00; Professor Church, 25 M. H.

28. Valves, Valve Gears, and Governors. Comparison of valve diagrams; analysis and design of valves, valve gears, and governors. Prerequisite, Mechanical Engineering 27 and Mechanics 2. Lectures, recitations, and accompanying drawing course 29. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 10:30; Professor Church, 26 M. H.

29. Valve and Valve Gears. Drawing-room practice accompanying course 28.

Fall, Tuesday and Thursday, 1:00; Professor Church, 25 M. H.

30. Machine Drawing. Conventional methods, detail and assembled drawings, tracing and blue printing. Prerequisite, course 22. Two-fifths course.

Winter, Tuesday and Thursday, 1:00; Professor Church, 25 M. H.

31. Machine Design. Elements of machine design, conventional and rational; adaptation of commercial sizes; proportioning fastenings, flanges, bearings, rotating pieces, connecting links, and machine supports; mechanics of machinery; influence of material and treatment on design. Lectures and recitations. Prerequisite, Mechanics 4 and course 26, Mechanical Engineering, and accompanying drawing course 32. Three-fifths course.

Spring, Monday, Wednesday, and Friday, 9:30; Professor Church, 26 M. H.

32. Machine Drawing. Drawing-room practice accompanying course 31. Two-fifths course.

Spring, Tuesday and Thursday, 1:00; Professor Church. 25 M. H.

33. Machine Design. Continuation of course 31. Lectures, recitations, and drawing. Notes, blue prints, and reference works.

Fall, 11:30; Professor Church, 26 M. H.

34. Steam Engine Design. Comparison of rational and empirical formulae; complete design of simple engine. Supplemented by

course 35. Lectures and recitations. Printed notes, blue prints, and drawings of best types of modern engines. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 9:30; Professor CHURCH, 26 M. H.

35. Drawing and Designing. Drawing-room practice accompanying course 34; as far as possible, complete drawings of an engine are made from calculations and designs developed in course 34. Three-fifths course.

Fall, Tuesday, Thursday, and Friday, 1:00; Professor CHURCH, 25 M. H.

36. Drawing and Designing. Continuation of course 35 and drawing-room and office work accompanying course 43, Mechanical Engineering. References made chiefly to blue prints and mechanical drawings of actual power and manufacturing plants. Two-fifths course.

Winter, Tuesday, Thursday, and Friday, 1:00; Professor CHURCH, 25 M. H.

37. Drawing and Designing. Continuation of course 36 and specialized engineering drawing. Prerequisite, course 36. Three-fifths course.

Spring, Tuesday, Thursday, and Friday, 1:00; Professor CHURCH, 25 M. H.

38. Gas Engine Design. Lectures, conferences and drawing-room practice for advanced and graduate students.

Hours to be arranged. Professor CHURCH, 26 M. H.

NOTE:—Students taking the electrical course take designing and drawing courses 57, 58, and 59, instead of 35, 36, and 37.

Courses in Steam Engineering, Manufacturing, Etc.

40. Thermodynamics of Engineering. Mechanical theory of heat, thermodynamics of gases and vapors, with special application to steam and other heat engines, air, and refrigeration. Prerequisites, Mechanics 5 and 6. Lectures and recitations. Peabody's Thermodynamics of the Steam Engine.

Spring, 8:30; Professor JONES, 16 M. H.

41. Heat Engines and Motors. Expansive working of steam and gas, principles of design, construction and operation of steam engines, air compressors, gas engines, and refrigerating machines.

Prerequisite, course 40. Lectures and recitations supplemented by course 73. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 8:30; Professor Jones, 16 M. H.

42. **Steam Boilers.** Heating value of fuels, combustion, economical production of steam; application of theory and practice in the design of steam boilers, chimneys, and accessories; steam piping and distribution. Prerequisite, course 31. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 9:30; Professor Church, 26 M. H.

43. **Power Plant Design.** Embodies the details of the earlier courses of instruction in prime movers and motive-power machinery in respect to the design of steam and electric power and hydraulic plants for power transmission and manufacturing purposes; location of the plant; selection, arrangement, subdivision into units and installation; economics, organization and management of power and manufacturing plants; engineering specifications. Lectures and accompanying course 36. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 8:30; Professor Jones, 16 M. H.

44. **Power Plant Design.** A continuation of course 43 for graduates and advanced students. Lectures, assigned reading, and designing. Hours to be arranged; Professor Jones, 16 M. H.

45. **Machinery and Mill Work.** Construction of shops and manufacturing plants, arrangement of machines, hoisting and conveying machinery. Lectures, recitations, and designing. Elective for seniors. Winter, 11:30; Professor Church, 14 M. H.

46. **Heating and Ventilating.** Principles, comparative merits and design of various systems of ventilating, heating by hot air, hot water, steam, electricity. A careful study of the systems in the different University buildings. Prerequisite, Physics 8. Lectures and recitations. Carpenter's Heating and Ventilating Buildings. Elective. Hours to be arranged; Professor Jones, 16 M. H.

47. **Materials of Engineering.** A study of the various materials used in engineering, the source, manufacture, qualities, cost, etc. Prerequisite, Mechanics 4.

Hours to be arranged; Professor Jones, 16 M. H.

48. Steam Turbines. Flow of saturated and superheated steam and the theory and design of the steam turbine. For advanced and graduate students. Prerequisite, Heat Engines 41.

Term and hours to be arranged; Professor CHURCH, 26 M. H.

49. Gas Engines and Gas Engineering. The study of fuel gases, gas production and transmission, gas engines, etc. For advanced and graduate students. Prerequisite, Heat Engines 41.

Term and hours to be arranged; Professor JONES, 16 M. H.

Courses in Electrical Engineering

For elementary courses in the theory of electricity, see the announcement of the Department of Physics.

50. Applied Electricity. An elementary course for special students. Management of dynamos and motors, wiring calculations, house wiring and line construction. This course will be given upon the application of four or more students.

Spring, 11:30; Professor JONES, 16 M. H.

51. Electrical Machinery. Principles of design, construction and operation of direct current machinery. Prerequisite, Physics, 11 and 12. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 9:30; Professor DICKINSON, 15 M. H.

52. Electrical Machinery. Principles of design, construction and operation of alternating current machinery. Prerequisite, Physics 11 and 12. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 9:30; Professor DICKINSON, 15 M. H.

53. Electrical Machinery. Theoretical consideration of the design and performance of alternating current motors. Prerequisite, course 52. Two-fifths course.

Spring, Wednesday and Friday, 10:30; Professor DICKINSON, 15 M. H.

54. Electric Power Transmission. Transmission of electrical energy from generating stations to points of distribution for general utilization. Theoretical consideration of underlying principles, practical problems, study of descriptive literature, observation. Prerequisite, Physics 11 and 12. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 10:30; Professor DICKINSON, 15 M. H.

55. **Electrical Distribution.** The distribution of electrical energy for use in mines, shops, and factories. Special attention will be given to the application of electricity to mining. Prerequisite, course 54. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 10:30; Professor Dickinson, 15 M. H.

56. **Electric Lighting and Railways.** The distribution and utilization of electrical energy for lighting and traction. Principles of design, construction, installation and operation of electric-lighting and railway units and systems. Three-fifths course.

Spring, Monday, Wednesday, and Friday, 9:30; Professor Dickinson, 15 M. H.

57, 58, 59. **Designing and Drawing.** Designing and drawing dynamos, motors, transformers, switchboards, and power stations. Three-fifths course, or nine hours a week for each number.

Fall, Winter, and Spring, Monday, Wednesday, and Friday, 1:30; Professors Church and Dickinson, 25 M. H.

60, 61, 62. **Electrical Engineering Laboratory.** Practical management of electrical machinery; study of switchboards; calibration of instruments for electrical measurements; investigation of losses in the utilization of electrical energy; study of electrical relations in transmission lines; testing arc and incandescent lighting units and systems; determination of efficiencies and characteristics in laboratory and commercial tests of dynamos, motors, transformers, and other electrical apparatus. To accompany courses 51, 52, and 53. Prerequisite, Physics 11 and 12. Two-fifths course each.

Fall, Winter, and Spring, Tuesday, Thursday or Saturday, 8:00; Professor Dickinson, 4 M. H.

63. **Electrical Research.** Laboratory investigations in special lines of electrical studies. For advanced and graduate students. In 1907-8-9, investigation of a.c. motor commutation and losses.

Hours and credits to be arranged; Professor Dickinson, 4 M. H.

64. **Electrical Engineering.** Seminar work for advanced and graduate students. Special topics will be selected for study and discussion.

Hours and credits to be arranged; Professor Dickinson, 13 M. H.

65. **Telephone Engineering.** A course for advanced students. Lectures and recitations on the development, physical theory, construction and operation of telephonic apparatus. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 11:30; Professor DICKINSON, 15 M. H.

66. Electricity for Mining Engineers. The generation and distribution of electrical energy for operating, lighting, ventilating, and pumping in mines. Prerequisite, Physics 11. Full course, including laboratory work.

Winter, Monday, Wednesday, and Friday, 10:30; Professor JONES, 16 M. H.

Courses in Experimental Engineering

70. Mechanical Laboratory. The comparison of experimental results and determination of physical laws from observation; theory, calibration and use of slide rule, planimeters, steam engine indicators, steam gauges, and thermometers; calorimeter tests for testing value of coal and natural gas; testing lubricating oils; analysis of flue gases. Prerequisite, or accompanying, Mechanics 2. Carpenter's Experimental Engineering. One-third course.

Fall, Saturday, 8:00; or Friday, 1:30; Professor JONES, 10 M. H.

71. Power Measurements. Efficiency tests of simple engines, pumps, dynamos, motors, and machinery of power transmission; measurements of power by Prony brake, rope brake, Alden absorption dynamometer, transmitting dynamometer; steam engine indicator practice and simple valve setting; determination of the quality of steam, test of small steam boiler. Prerequisite, or accompanying, Mechanics 12. One-third course.

Winter, Saturday, 8:00; or Friday, 1:30; Professor JONES, 10 M. H.

72. Testing Materials of Engineering. Tensile, torsional, compressive, and transverse tests of wrought iron, cast iron, steel, and timber; transverse, compressive, and absorption tests of stone, brick, cement, and concrete; also tests for fineness, specific gravity, time of setting, and constancy of volume of cement. Prerequisite, or accompanying, Mechanics 4. One-third course.

Spring, Saturday, 8:00; or Friday, 1:30; Professor JONES, 10 M. H.

73. Mechanical Engineering Laboratory. Experimental work in thermodynamics, tests of injectors, calorimeters, steam and oil separators, non-conducting coverings; flow and quality of steam, practice in valve setting, behavior of steam in the cylinder; economy tests of hot air engines, steam engines, gas engines and steam

boilers; such other work as may be assigned. Prerequisite, Mechanical Engineering 40. Two-fifths course.

Fall, 1st section, Saturday, 8:00; 2nd section, Tuesday, 8:30; 3rd section, Thursday, 8:30; other sections as assigned.

Professor Jones, 10 M. H.

74. Mechanical Engineering Laboratory. Tests of steam heating apparatus; duty trials of steam pumps; efficiency tests of air compressors, hydraulic motors, fans, blowers, etc.; application of Hirn's analysis to the steam engine; flow of water through pipes and orifices, calibration of water meters. Two-fifths course.

Winter, 1st section, Saturday, 8:00; 2nd section, Tuesday, 8:30; 3rd section, Thursday, 8:30; other sections as assigned.

Professor Jones, 10 M. H.

75. Mechanical Engineering Laboratory. Combined tests of performances of boilers, engines, electrical and other power transmission machinery; testing of plants away from the University when the opportunity affords; special research work. Prerequisite, Mechanical Engineering 74. Two-fifths course.

Spring, hours to be arranged; Professor Jones, 10 M. H.

76. Engineering Laboratory. Commercial tests and research work. For graduates and advanced students. Prerequisite, course 75. Credit will be given on the basis of the time spent in the laboratory and the progress of the student.

Hours to be arranged; Professor Jones, 10 M. H.

For laboratory courses in electrical engineering see courses 60, 61, and 62.

MECHANICS AND APPLIED MATHEMATICS

Professor Emory

1. Elementary Mechanics. The principles of rational mechanics treated without the calculus and from the physical standpoint. For students pursuing the certificate electrical course and those preparing for the work of the artisan, foreman, or draughtsman. Prerequisite, trigonometry. Spring, 10:30; 20 M. H.

2. Statics. A study of the composition of forces, polygon of forces, magnitude and resolution, equilibrium of concurring forces, resultants of parallel forces by analytical and graphical methods, moments of forces, couples, equilibrium of non-concurrent forces,

center of gravity and moment of inertia by analytical and graphical methods, the stability of structures, and the stresses in framed and jointed construction. Prerequisite, the calculus.

Spring, 8:30; 20 M. H.

3. **Kinetics.** Laws of motion, motion in vacuum and in resisting medium, central forces, centrifugal force, the pendulum and governor, impulse, work, energy, power, modulus of machine, kinetic energy of revolving masses, work of variable forces, duty of engines, impressive forces, motion of rigid bodies, fly-wheels, conservation and dissipation of energy. Prerequisite, course 2.

Fall, 9:30; 20 M. H.

4. **Applied Mechanics.** Strength of materials. Resistance and elasticity of materials, pipes, cylinders and riveted joints, cantilever and simple beams, tension and compression, resilience, shear and torsion, strength of timbers, iron, steel, stone, cement, elastic limits of materials, factors of safety. Design of simple structures. Prerequisite, course 3. Winter, 9:30; 20 M. H.

5. **Development and Utilization of Power.** Lecture course. A study of the history of the development of the modern pumping engine, railroad locomotive, naval and stationary steam engine, with illustrations and descriptive study of the accessories of these generators. Course arranged for general arts students as well as for engineering students. Required of engineering students; elective for sophomores or seniors. Fall, 8:30; 20 M. H.

6. **Development and Utilization of Power.** Lecture course. History of the development and present practice in the use of pumps, heaters, condensers, economizers, purifiers, pipe connections, chimneys, boilers, and other accessories for steam plants, hot air, gas engines, oil engines, wind and hydraulic engines, binary vapor engines, air compressors, and other sources of power. Prerequisite, courses 4 and 5. Winter, 8:30; 20 M. H.

NOTE:—Any one of the following courses or half-courses will be given in any quarter at an hour to be arranged.

7. **Development and Utilization of Power.** Text-book course. Mathematical study of power, the Clausius, Rankine and physical methods of analysis of power development, measurement of power, thermodynamics of perfect gases and of vapors, of gas engine and steam cycles, computation of the size and efficiencies of generators, and a complete calculation for power plant to perform some special

work, such as water supply, coal handling or other mining operation, etc. Advanced course in power, study of the economical development of power and the designing of power. For graduates. 20 M. H.

8. **Materials of Engineering and Construction.** Seminary course in the study of the various materials used in engineering, architecture, and manufactures, their occurrence, modes of treatment, uses, costs, efficiency, etc. For engineers and others having preparation. 20 M. H.

9. **Building Superintendence and Architectural Engineering.** Construction and inspection of foundations, stone, cement, brick work, iron and steel work, carpentry and mill work, roof trusses, roof coverings, cage construction and veneer work for high buildings, preservation of iron work, fire proofing, plastering, inspection of gas fitting, electric wiring, systems of heating, ventilating, etc. For seniors and graduates. 20 M. H.

10. **Applied Mathematics.** A special course for those making mathematics their major and those who desire a study of its applications to mathematical instruments and appliances and to the methods of analysis. An application of the calculus to mechanics, physics, and exact measurements. Prerequisite, integral caculus. One-half course; may accompany course 11. 20 M. H

11. **Method of Least Squares.** Errors of observations; principles of probability, weights of observations, principle of least squares, probable errors of observation, corrections of observations, normal equations, empirical formulae. For seniors and graduates. Prerequisites, physics and calculus. 20 M. H.

12. **Differential Equations.** Study of the differential equation of the first order and first degree, first order and higher degrees, including special applications to mechanical and physical problems. Prerequisite, calculus. Half course or full course. 20 M. H.

MINING ENGINEERING

Professor PAYNE

1. **Mine Surveying.** Topography; mine location and exploitation; outcrop surveys. Full course. Spring, 10:30; 16 M. H.

2. **Mine Surveying.** Mine location and exploitation, continued; location and construction of surface and underground railways; drainage; trackwork; reports on mineral properties. Prerequisite,

course 1. Full course. Fall, recitations and lectures, Monday, Wednesday, and Friday, 10:30; field practice, Tuesday and Thursday, 1:30; 16 M. H.

3. **Shaft Sinking, Excavation, and Tunneling.** Breaking ground; shaft and slope sinking; boring and drilling; excavating and handling materials; tunneling; working out deposits; timbering and supporting excavations; rock drilling; construction of dams; blasting and explosives. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 9:30; 16 M. H.

4. **Mining Machinery and Haulage Systems.** Steam, air, electric and gasoline locomotives; air compressors; pneumatic tools; hoisting engines; ventilating fans; mine cars; coal cutting and punching machinery; haulage and conveying systems; repair shops; transmission; signalling; pumping. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 9:30; 16 M. H.

5. **Mine Design.** Layout of mines; design and construction of tipples and other mine structures; ventilation. Two-fifths course.

Fall, Tuesday and Thursday, 9:30; 16 M. H.

6. **Mine Design.** Ventilation, continued; design and construction of coke ovens, coal washing plants, water supply for mining and coke plants, plans and specifications. Two-fifths course.

Winter, Tuesday and Thursday, 9:30; 16 M. H.

7. **Mine Drawing and Design.** Drafting room practice and design, accompanying Course 5. Two-fifths course.

Fall, Tuesday and Thursday, 1:30; 25 M. H.

8. **Mine Drawing and Design.** Same, including map and title lettering, accompanying course 6. Three-fifths course.

Winter, Monday, Tuesday, and Thursday, 1:30; 25 M. H.

9. **Mine Drawing and Design.** Accompanying Thesis work. Two-fifths course. Spring, Tuesday and Thursday, 1:30; 25 M. H.

10. **Mine Operation.** Preparation of coal; properties of gases; use of safety lamps; principles of coking; mine fires; organization and handling of men; mine administration and accounting; distribution of cars and sale of product, referring especially to coal mining. Two-fifths course. Spring, Tuesday and Thursday, 9:30; 16 M. H.

11. **Metallurgy.** Uses of fuels; metallurgy of iron and steel; reduction of ores, etc. Three-fifths course.

Spring, Monday, Wednesday, and Friday, 9:30; 16 M. H.

12. Clays, Limestones, and Cement. Methods of mining; properties of the raw materials and their manufacture into the finished product; boiler scale; feed water difficulties, etc. Two-fifths course. Spring, Tuesday and Thursday, 11:30; 16 M. H.

Note:—The detailed application of electricity not covered in the above courses is fully considered in Applied Electricity, Physics 11, Power Plant Design 43, and Electrical Engineering 65.

THE COLLEGE OF AGRICULTURE

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

THOMAS CLARK ATKESON, Ph.D., *Dean and Professor of Agriculture*

DANIEL WEBSTER WORKING, A.M., *Superintendent of Agricultural Extension Work*

ARETAS WILBUR NOLAN, A.B., *Assistant Professor of Horticulture, Forestry, and Entomology*

FREDERICK RANDOM WHIPPLE, M.D.V., *Instructor in Veterinary Science*

CHARLES AUGUSTUS LUEDER, D.V.M., *Instructor in Dairying*

CHARLES WALKER SPRINGER, V.M.D., *Instructor in Veterinary Science*

ALEXANDER REID WHITEHILL, Ph.D., *Professor of Chemistry*

SAMUEL B. BROWN, *Professor of Geology*

BERT HOLMES HITE, M.S., *Professor of Agricultural Chemistry*

ROBERT ALLEN ARMSTRONG, A.M., *Professor of English Language and Literature*

THOMAS EDWARD HODGES, A.M., *Professor of Physics*

CHARLES HENRY PATTERSON, A.M., *Professor of Rhetoric*

JOHN NATHAN SIMPSON, M.D., *Professor of Anatomy and Physiology*

JUSTIN FRANK GRANT, M.D., *Professor of Anatomy and Pathology*

JOHN LEWIS SHELDON, Ph.D., *Professor of Botany and Bacteriology*

ALBERT MOORE REESE, PH.D., *Professor of Zoology*

HORACE ATWOOD, M.S.AGR., *Instructor in Poultry Industry*

RUFUS WEST, *Assistant in Metal Working*

THOMAS HOWARD CATHER, *Foreman of Machine Shop*

JOHN B. GRUMBEIN, *Foreman of Wood Shop*

AIM AND SCOPE

This College offers to students a training designed to fit them for the practice of agriculture, while opportunity for general culture is also afforded. Its object is the training of students to be not only progressive farmers, but good citizens and successful business men as well.

The technical portion of the courses offered in this College constitutes about one-half of the entire work of the student. In studying these technical subjects, the aim is to make plain the principles of agricultural science, and to give such practical instruction as conditions and facilities will permit.

EQUIPMENT

The laboratories and apparatus of the scientific departments of the University, and the libraries of the Agricultural Experiment Station and University are at the command of the students in the College of Agriculture. The farm of the Agricultural Experiment Station, together with its gardens, experiment plats, laboratories, and collections, are available for students desiring to acquaint themselves with the practical and scientific methods of conducting agricultural operations, and to investigate scientific questions relating to the progress and development of agriculture.

The farm is equipped with barns, stables, and other buildings, and presents a variety of soils and conditions existing upon many of the farms of the state. Upon this farm are kept different varieties of farm animals and the most improved agricultural implements. Facilities are provided for studying the most economical methods of handling live stock and their products, including poultry.

The dairy equipment consists of one "National" power separator, several small hand separators of different makes, one power and one hand churn, one 200 gallon tempering vat, one 75 gallon vat, one power and one hand butter worker, apparatus for the Babcock test, preservative tests, the acid test. This equipment occupies one-half of the basement of Martin Hall.

COURSES OF STUDY

DEGREE COURSES

Bachelor of Science in Agriculture

Entrance Requirements. Students will be admitted to the freshman class in this course on completion of twelve and one-half units, of which two units in English, one in mathematics, one in history, one in chemistry, one in physics, and one-half in botany are prescribed, and the remaining six elective.

College Requirements. The degree of Bachelor of Science in Agriculture will be conferred upon any student who satisfies the above entrance requirements and satisfactorily completes forty-two college courses, of which four in agriculture, two in animal husbandry, one in dairying, three in horticulture, two in veterinary science, one in agricultural chemistry, and one in agricultural physics are prescribed.

At least six additional courses must be elected from the technical courses announced in the College of Agriculture, and the remaining twenty-two may be elected from the courses given in the College of Agriculture or the College of Arts and Sciences. The dean of the College of Agriculture will act as the student's class officer and adviser, and will have authority to require such elective courses as he may consider necessary or advisable.

Doctor of Veterinary Science

Entrance Requirements. After September 1st, 1909, students will be admitted to the first year class in this course on completion of ten units, of which two units in English are prescribed. Students who have completed the Diploma Course in Agriculture will also be admitted to the first year of this course.

College Requirements. The degree of Doctor of Veterinary Science will be conferred on any student who satisfies the above entrance requirements and satisfactorily completes twenty-four prescribed courses as named in the distribution of work given below.

DISTRIBUTION OF WORK IN THE VETERINARY COURSE

First Year

Hour	*Fall*	*Winter*
8:30	Anatomy 1	Anatomy 2, 3-5
9:30		Physiology 2
10:30	Physiology 1	Animal husbandry 2
11:30	Materia medica 6, 2-5	Materia medica 7, 2-5
	Pharmacy 8, 1-5	Dentistry 23, 2-5
	Clinical diagnosis 10, 2-5	Pharmacy 9, 1-5
1:30	Histology 1	

Second Year

8:30	Bacteriology 4	Parasitism 21, 1-5
		Anatomy 4, 1-5
		Obstetrics 20, 1-5
		Therapeutics 12, 2-5
9:30	Medicine and surgery 14	Medicine and surgery 15
10:30	Anatomy 3, 3-5	Bovine pathology 22
11:30	Chemistry 1	Chemistry 2
1:30	Therapeutics 11	

Third Year

8:30	Canine pathology 18, 2-5	Animal husbandry 3
	Lameness 25, 2-5	
	Opthamology 19, 1-5	
9:30	Medicine and surgery 16	Medicine and surgery 17
10:30	Surgical anatomy 5, 2-5	Physiology 3
	Toxicology 24, 1-5	
	Milk and meat inspection 1, 2-5	
11:30	Milk and meat inspection 2, 3-5	
	Therapeutics 13, 2-5	
1:30		Pathology 1
2:00	Clinic	Clinic

DIPLOMA COURSE

This course consists of thirty courses, all of which are prescribed, as named in the distribution of work given below. A diploma of graduation will be granted on completion of this course. Students who complete this course will be admitted to the freshman class in the College of Agriculture.

DISTRIBUTION OF THE WORK IN THE DIPLOMA COURSE

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	*History 1	*History 2	*History 3
9:30	*English 1	*English 2	*English 3
10:30	Botany 1	Botany 2	Entomology 1-2
11:30		Home Dairying 1	

Second Year

8:30	Horticulture 1	Horticulture 2-3	Horticulture 4
9:30	Chemistry 1	Chemistry 2	Chemistry 3
10:30	*English 4	*English 5	*English 6
11:30		Animal Hus. 1	

Third Year

8:30	Physics 1	Animal Hus. 3	Animal Hus. 4
9:30	Agriculture 1	Agriculture 2	Agriculture 4
10:30	*Mathematics 1	*Mathematics 2	*Mathematics 3
11:30		*English 7	

NOTE:—The courses marked with a star are described in the announcements of the University Preparatory Schools.

CERTIFICATE COURSE

No entrance requirements are made for this course. A certificate, indicating the work done, will be granted on completion of this course, which may be accomplished in one school year, or in any three quarters of twelve weeks each. This course consists of twelve

full courses, at least ten of which shall be elected from the technical courses announced in the College of Agriculture. The other two courses may be elected from those given in the Preparatory School or the College of Arts and Sciences, subject to the advice of the dean of this College.

The object of this course is to give young and middle aged men who are engaged in farming, or who expect to become farmers, an opportunity to learn something of the principles and sciences involved in their occupation.

SHORT COURSES

Agriculture. This course covers a period of twelve weeks during the winter term, and is designed to give students, in the briefest time possible, some knowledge of the principles of agriculture, horticulture, soils, farm crops, fertilization, and the principles of breeding, caring for and feeding animals.

Animal Husbandry. This is a winter quarter course in veterinary science, stock breeding, stock feeding, and a general survey of the subject of animal husbandry. The purpose is not to make veterinary surgeons, but to enable students to diagnose properly the principal diseases among farm animals; to treat common accidents; to use preventive measures, and to understand the principles of breeding and feeding domestic animals.

Horticulture. This is work which may be taken in the winter quarter, and consists of studies in principles of fruit culture and pomology. Instruction in botany and entomology should be taken parallel with these subjects.

Poultry Industry. This course is designed to meet the needs of those who expect to engage in the poultry industry. Practice will be given in the operation of different makes of incubators and brooders; feeding for egg production; fattening fowls for market; copanizing; judging; and mating. The lectures will cover the origin, classification, and characteristics of domestic fowls, breeding, feeding, management, and the construction of poultry buildings.

Dairying. Instruction will be given both by lectures and demonstrations, and each student will have an opportunity to become expert in the practical operations of dairying. Among the subjects which will be discussed will be the use of the Babcock test, the ripening of cream, separating, churning, salting, working, and packing butter; the care of milk; the selection and care of dairy cows, feeds, and feeding; the construction and care of stables, etc.

SPECIAL WINTER COURSE

The instruction in this course begins January 9, 1910, and continues for four weeks. The work is intended primarily for those who desire some practical and theoretical knowledge of the latest methods of agriculture, and whose time for study is limited. The instruction, which is of a very practical nature, is given by the professors in the College of Agriculture and eminent specialists from elsewhere. Students are given ample opportunity to test in the laboratory many of the theories discussed in class, thereby acquiring a thorough mastery of them.

Methods of conducting farmers' institutes and the subject matter that should be presented at them receive careful attention. Institute instructors will be especially interested in this feature of the work.

AGRICULTURAL EXTENSION WORK

Professor WORKING, Superintendent

In the development of their purpose to make the work of the University increasingly useful to the people of the State, the authorities have established an Agricultural Extension Department. This department will carry the work of the College of Agriculture to the farmers and young people of the State by means of extension schools in suitable centers, by lectures at institutes and elsewhere, by correspondence instruction, and by organizing reading courses and promoting reading classes wherever possible.

The department will be at the service of school officers and teachers who desire to introduce the teaching of agriculture into elementary and high schools. It invites correspondence from those who are interested in the movement to make the schools, especially those of the rural districts, more directly helpful to the people on the farms by giving them a deeper and more sympathetic insight into the vital problems of plant and animal life, and the processes by which plants and animals can be made to contribute more helpfully to the welfare of the country.

DEPARTMENTS OF INSTRUCTION

Only the technical courses are described here. For the other courses which may be elected by students in the College of Agriculture, see the courses in the College of Arts and Sciences.

AGRICULTURE

Professor Atkeson

1. **Soils and Farm Crops.** First principles of agriculture; origin, cultivation, drainage, and classification of soils; indications of fertility; production and handling of farm crops; preparation of land for the seed and subsequent care of the plant. Lectures and recitations.
Fall, 9:30; 8 M.

2. **Fertilizers and Manures.** Farm yard manures; humus and vegetable molds; composts; modes of applying manures; maintenance of meadows and pastures by manuring; chemical fertilizers; a general discussion of the methods of extensive and intensive farming. Lectures and recitations. Winter, 9:30; 8 M.

3. **Agricultural Science.** Relation of soil and air to plants; the atmosphere as a source of plant food; relations of water to the soil; movements of water in the soil; irrigation; drainage; soils as chemical agents; rotation of crops; how plants grow and feed. Lectures and recitations. Fall, 11:30; 8 M.

4. **Rural Economics.** Farming as a business; method of keeping farm accounts; a brief study of the laws that directly concern the farmer; how the farmer is affected by industrial and social conditions; the mutual relations of agriculture and other industries; value and prices of land and agricultural products; land tenure; co-operation; a careful study of all questions affecting agriculture. Lectures and recitations. Spring, 9:30; 8 M.

5. **History of Agriculture.** A general history of agriculture, beginning with ancient times and tracing the history of agriculture, agricultural methods, and the development of trade and commerce through all ages to the present; a special study of the present practices and methods of competing with foreign countries. Lectures and recitations. Spring, 10:30; 8 M.

7. **Forage Crops.** How to cultivate, harvest, store, and use forage crops; silos and silage; soiling, folding, and pasturing. Lectures and recitations. Fall, 10:30; 8 M.

8. **Cereal Crops.** A comprehensive study of the history, characteristics, and cultivation of the grain-producing plants, as related to American and West Virginia conditions. Lectures and recitations. Spring, 11:30; 8 M.

9. **Farm Equipment.** Selecting, planting, and equipping farms; planning and erecting farm buildings and fences; building roads; farm vehicles and machinery; farm implements and the application of different kinds of power for farm purposes. Lectures and recitations. Half-course. Fall, 8:30; 8 M.

10. **West Virginia Agriculture.** Agricultural, horticultural, dairy, and live stock possibilities of West Virginia; local conditions throughout the state will be considered in connection with their adaptation to special agricultural purposes. Class discussions and required papers on assigned subjects; reference reading; lectures. Half-course. Fall, 8:30; 8 M.

11. **Agricultural Education.** Principles and methods in agricultural education. A course for students preparing to teach nature-study and agriculture in the public schools. A study of the soil, its origin, nature, function, properties and classification; problems of temperature, aeration, control of moisture; enrichment and empoverishment of the soil; the plant, how it feeds and grows, its mode of reproduction; factors in crop production, rotation, value and use of legumes, selection and testing of seed; farm animals, their types and breeds, care and management; dairying, production of milk, testing and care of milk; farm plans; farm machinery; roads; beautifying home grounds; economics of agriculture. A consideration of what features of agricultural science are best adapted to the needs of elementary education, and what laboratory work shall be given, what apparatus used, how much text-book study, and what field experiments can be planned and executed.

Spring, 9:30; Professor NOLAN, 25 M.

ANIMAL HUSBANDRY

Professor ATKESON and Dr. LUEDER

1. **History and Characteristics of Breeds.** This course deals with the improved breeds of horses, cattle, sheep and swine. A study of the origin, development, distribution and characteristics of each breed will be made.

Winter, 11:30; Professor ATKESON, 8 M.

2. **Principles of Breeding.** What is meant by breeding; how to attain the ideal; heredity; atavism, variation, selection, correlation, in-and-in breeding, cross breeding and grading; influence of climate and environment upon habits and development. Lectures and recitations. Winter, 10:30; Professor ATKESON, 8 M.

3. **Feeds and Feeding.** Laws of animal nutrition; composition and digestibility of feeding stuffs; feeding farm animals; feeding for milk, muscle, and fat; sources of food, how the animals use food; preparation of food; influence of food on animal form; study of rations and feeding standards. Lectures and recitations.

Winter, 8:30; Professor ATKESON, 8 M.

4. **Live Stock Management.** Care of domestic animals in barn and field; the management of flocks and herds; the care of work animals and driving horses. Lectures and recitations.

Spring, 8:30; Dr. LUEDER, 22 M.

5. **Stock Judging and Pedigree.** This course will consist of a study of standards and practice in judging by score cards and the tracing and writing of pedigrees. The University stock and that of near-by stock men will be used in judging.

Fall, hour to be arranged; Dr. LUEDER, 22 M.

6. **Beef, Pork, Mutton, and Wool Production.** A systematic study of the most successful and economical methods of producing cattle, hogs, and sheep for the market; production of baby beef; winter lambs; wool production; finishing pigs of lard and bacon types for market. Prerequisite, Animal Husbandry 3.

Spring, hour to be arranged; Dr. LUEDER, 22 M.

BOTANY AND BACTERIOLOGY

Professor SHELDON

See announcements in the College of Arts and Sciences, page 59.

CHEMISTRY.

Professor WHITEHILL and Professor HITE

For courses in elementary chemistry see page 61.

25. **Agricultural Chemistry.** A course of lectures discussing as far as possible the more instructive and important applications of chemistry to agriculture, but having to do primarily with the maintenance of soil fertility. Prerequisites, Chemistry 1-6.

Spring, 10:30; Professor HITE, A.

DAIRYING

Dr. LUEDER

1. **Home Dairying.** This course consists of a study of the care of milk, separators and separation, ripening of cream, including starters and the acid test, churns and churning, working, salting, printing, and packing butter, Babcock test for butter fat, and care of dairy machinery. Enough laboratory work will be given to make each student proficient in each of the above operations.

Winter, 1:30; 22 M.

2. **Testing Dairy Products.** This course includes a study of the composition of milk, tests for butter fat, tests for preservatives in milk, application of lactometer, calculating butter and cheese yields, and butter analysis. Winter, hour to be arranged; 22 M.

3. **Dairy Bacteriology.** This course consists of a study of bacteria as they affect the dairyman, including contamination of milk, fermentation in milk, disease germs transmissible to man through milk, and preservation of milk for commercial purposes. Half-course. Spring, hour to be arranged; 22 M.

4. **Dairy Refrigeration.** This course is designed to give the student a working knowledge of the manufacture and preparation of milk and water ices. A study will be made of the principles and

operation of freezing machines, freezing mixtures, "fillers," flavors and flavoring, and the preservation of frozen mixtures.

Spring, hour to be arranged; 22 M.

5. **The Dairy Breeds.** This course deals with the history and characteristics of the dairy breeds. A study of each of the improved breeds is taken up with special reference to families and individuals in America. The requirements for advanced registry are studied, and the methods of making test for official records. This course is designed to meet the requirements of students who wish to make dairying a specialty, and is given only to students who have attained the grade of sophomore. Fall, hour to be arranged; 22 M.

6. **Dairy Manufacturing.** This course deals with the composition of milk as affected by external influences, and the principles and practices observed in the manufacture of milk products. Lectures and laboratory work. Given only to students who have attained the grade of sophomore. Winter, hour to be arranged; 22 M.

ENTOMOLOGY.

Assistant Professor NOLAN

1. **General Entomology.** Lectures and recitations on the characteristics of the orders, sub-orders, and more important families of insects; habits and habitat of representative species. Half-course.

Fall and Spring, 10:30; 25 M.

2. **Morphology of Insects.** Laboratory and field study of life history, anatomy, habits, and life relations of insects and their allies. Half-course. Fall and Spring, 10:30; 25 M.

This course is to be taken in connection with course 1.

3. **Economic Entomology.** Discussion of the more important insect pests, and of methods of controlling them. Economic problems connected with applied entomology discussed, reported upon, and field observations made. Winter, 10:30; 25 M.

4. **Nature-study.** Literature, material, and methods of nature-study, with special reference to insects. Lectures, reference reading and field work. This course is of practical value to public school teachers. Spring, 10:30; 25 M.

FORESTRY

Assistant Professor NOLAN

1. **Forest Botany.** Systematic and biologic study of trees and shrubs, special attention given to the species of economic importance. By means of lectures, texts, and laboratory work the student is taught the morphological and silvical characteristics of trees. Half-course.
Fall, 11:30; 25 M.

2. **Elements of Silviculture.** A practical study of factors governing forest growth and distribution; markings for cuttings; forest seeding and planting; methods of thinning and cutting. The class has constant practice in identifying trees and shrubs by external features. Half-course. Fall, 11:30; 25 M.

3. **Forestry Economics.** Relation of the state to natural resources; the forest as a resource; as a condition; factors of forest production and business aspects; natural history of forests; principles and methods of forest policies; forest policies of foreign nations; forest conditions of the United States; the forestry movement; forest regulation and administration. Lectures and text-books. Half-course.
Winter, 11:30; 25 M.

4. **Forest Technology.** The histology of wood-tissues, leading to the identification of the economic woods of the state, and the more important exotic species. Structural, physical, mechanical, and chemical properties of wood, and the influences determining the same; diseases and faults; uses to which woods are best suited. Laboratory work, mill inspection, and class demonstrations. This course is to be taken in connection with course 3. Half-course.
Winter, 11:30; 25 M.

5. **Forest Management.** The economic principles underlying the management of forest property by national, state, individual, and corporate owners. Methods of studying the growth and yields of forests. The regulation of farm wood-lots to sustain their productiveness. Forest protection. Lectures and texts. Half-course.
Spring, 11:30; 25 M.

6. **Forest Mensuration and Survey.** The course embraces timber cruising and estimating, and lumber inspection; methods of estimating standing timber; topographic surveys of small areas, and forest maps; methods of determining contents of logs, the use of the American log rules; stem analysis, and estimation of rate of tree growth.

During the term the student is required to complete an investigation of the growth and yield of some one species, and to prepare a forest map of an assigned tract. This course is to be taken in connection with course 5. Half-course. Winter, 11:30; 25 M.

HISTOLOGY AND PATHOLOGY

For courses in these subjects see page 188.

HORTICULTURE

Assistant Professor NOLAN

1. **Plant Propagation.** A foundation course for subsequent work in pomology. A study of germination of seeds and spores; multiplication by cuttings, layers, stolons, buds, grafts, seed formation, natural and hand pollination; special methods of propagation for each kind of plant; early care of bush and fruit trees. It is advised that Botany 1 be taken before or contemporaneously with this course. Lectures, text-book, and laboratory and field work. Fall, 8:30; 25 M.

2. **Fruit Growing.** Classification of fruits, and the geography of fruit growing; choice of location; meteorological and market conditions; wind-breaks; frosts and freezes; tillage in general; cover crops; fertilizing orchards; laying out of orchards; setting the trees; secondary care; diseases, insects and spraying; harvesting and marketing; storing; the renovation of old orchards. Lectures and texts. Half-course. Winter, 8:30; 25 M.

3. **Practical Pomology.** The study and practice of care of orchards; a comprehensive study of the different types of fruit; preparation and application of the different spray mixtures; methods of combatting insect enemies and fungous diseases; study of greenhouse construction and methods; observation work, and the preparation of tables to show natural determinants of fruit growing. Recitation, laboratory, and field work. This course is to be taken in connection with course 2. Half-course. Winter, 8:30; 25 M.

4. **Vegetable Gardening.** A study of the general principles of vegetable growing, accompanied by garden practice in the actual growing of the plants. Consideration of the following topics: lay-out of the vegetable garden; the use of glass in hot-beds, cold frames, and forcing hills; the soil, its treatment and fertilization; tools in vegetable gardening; seeds and seeding; irrigation, double-cropping, transplanting, weeds, insects, and fungi; packing, storing, and market-

ing vegetables; classification of vegetable crops; choice of varieties, and the cultural requirements; methods of home, school, and truck gardening. Lectures, text-books, and field work. Spring, 8:30; 25 M.

5. **Landscape Gardening.** Ornamental and landscape gardening with special reference to the beautifying of home and school grounds; suggestions for arrangement of trees, shrubs, and flowers; location and construction of walks and drives; practical problems in designing and planning grounds; making the landscape picture; seasonal studies of ornamental plants. Lectures, texts, and field work.

Spring, hour to be arranged; 25 M.

MECHANIC ARTS

Mr. WEST, Mr. CATHER, and Mr. GRUMBEIN

1. **Woodworking.** Instruction in carpentry, joinery, and other bench work; exercises with the fundamental tools in soft and hard woods, and in matching, molding, joining, and making typical framed work; models of doors, gates, bridges, etc. Nine hours per week, or 3-5 course.

Fall, Monday, Wednesday, and Friday, 1:30; or Tuesday and Thursday, 1:30, and Saturday, 8:00. Mr. GRUMBEIN, 21 E.

5. **Forging.** Exercises in drawing out and sizing, forming and welding, jointing and fitting iron; steel forging, tempering, annealing; determining quality of iron and steel and strength of welded joints; exercises in making and dressing typical farm tools. Nine hours a week, or 3-5 course.

Winter, Monday, Wednesday, and Friday, 1:00; Mr. WEST, 7 E.

10. **Machine Work.** Iron work at the bench, chipping, filing, fitting, scraping, polishing; hand work with machine tools; drilling, tapping; brazing, tinning, soldering, laying out, cutting, and forming sheet metal. Nine hours per week, or 3-5 course.

Spring, Monday, Wednesday, and Friday, 1:00; Mr. CATHER, 11 E.

MILK AND MEAT INSPECTION

Dr. WHIPPLE and Dr. LUEDER

11. **Milk and Urine Analysis.** Two-fifths course.

Fall, 10:30; Dr. LUEDER, 22 M.

2. **Meat Inspection.** Three-fifths course.

Fall, 10:30; Dr. WHIPPLE, 26 M.

PHYSICS

Professor Hodges

15. **Agricultural Physics.** Mechanical analysis of soils; designing and construction of farm buildings—economy in form and material; ventilation and regulation of temperature; draft of farm machinery; farm motors and road construction. Open to all college students. Prerequisite, Physics 1, or equivalent work elsewhere. King's Agricultural Physics. Spring, 8:30; 11 S.

VETERINARY SCIENCE

Anatomy

Dr. Lueder

1. **Anatomy.** In this course anatomy is fully explained in its relation to medicine and surgery, and is taught in a most practical manner. This includes lectures, quizes, dissections, and practical demonstrations on the living subject. Dissecting material is furnished by the University free of charge. Text-book, Strangeway's Anatomy. Fall, 8:30; 22 M.

2. **Anatomy.** Continuation of course 1. Three-fifths course. Winter, 8:30; 22 M.

3. **Anatomy.** Continuation of course 2. Three-fifths course. Fall, 10:30; 22 M.

4. **Anatomy.** Continuation of course 3. One-fifth course. Winter, 8:30; 22 M.

5. **Surgical Anatomy.** Two-fifths course. Fall, 10:30; 22 M.

Pharmacology

Dr. Whipple

6. **Materia Medica.** This subject is taken up in the first year and the course consists of lectures and practical demonstrations on the living animal. Two-fifths course. Fall, 11:30; 26 M.

7. **Materia Medica.** Continuation of course 6. Two-fifths course. Winter, 10:30; 26 M.

8. **Pharmacy.** In this course the student is required to assist in making extracts, tinctures, infusions, blisters, powders, balls, ointments, and liniments and by so doing becomes familiar with all the branches of veterinary pharmacy. One-fifth course.
Fall, 11:30; 26 M.

9. **Pharmacy.** Continuation of course 8. One-fifth course.
Winter, 10:30; 26 M.

10. **Clinical Diagnosis.** This course consists of lectures and practical demonstrations on the living subject. A free clinic furnishes examples of all the most common diseases and affords the student practice in diagnosis. Two-fifths course. Fall, 11:30; 26 M.

11. **Therapeutics.** Two-fifths course. Fall, 1:30; 26 M.

12. **Therapeutics.** Continuation of course 11. Two-fifths course.
Winter, 8:30; 26 M.

13. **Therapeutics.** Continuation of course 12. Two-fifths course.
Fall, 11:30; 26 M.

24. **Toxicology.** One-fifth course. Fall, 10:30; 26 M.

Medicine and Surgery

Dr. WHIPPLE and Dr. SPRINGER

14. **Practice of Veterinary Medicine and Surgery.** Instruction in this subject is begun in the second year with a thorough course in the technique of physical diagnosis. A free clinic is provided which supplies ample material. Fall, 9:30; Dr. WHIPPLE, 26 M.

15. **Practice of Veterinary Medicine and Surgery.** Continuation of course 14. Winter, 9:30; Dr. WHIPPLE, 26 M.

16. **Practice of Veterinary Medicine and Surgery.** Continuation of course 15. Fall, 9:30; Dr. WHIPPLE, 26 M.

17. **Practice of Veterinary Medicine and Surgery.** Continuation of course 16. Winter, 9:30; Dr. WHIPPLE, 26 M.

18. **Canine Pathology.** Two-fifths course.
Fall, 9:30; Dr. SPRINGER, M.

19. **Opthalmology.** One-fifth course.
Fall, 8:30; Dr. SPRINGER, M.

20. **Obstetrics.** One-fifth course. Winter, 8:30; Dr. SPRINGER, M.

21. **Parasitism.** One-half course. Winter, 8:30; Dr. SPRINGER, M.

22. **Bovine Pathology.** Winter, 10:30; Dr. WHIPPLE, 26 M.

23. **Dentistry.** Two-fifths course.
Winter, 1:30; Dr. WHIPPLE, 26 M.

25. **Lameness.** Two-fifths course.
Fall, 8:30; Dr. WHIPPLE, 26 M.

30. **Course for Farmers.** Anatomy and physiology of domestic animals.
Spring, hour to be arranged; Dr. WHIPPLE, 26 M.

31. **Course for Farmers.** Diseases of domestic animals.
Spring, hour to be arranged; Dr. WHIPPLE, 26 M.

THE COLLEGE OF LAW

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

CHARLES E. HOGG, LL.D., *Dean and Professor of Common-Law Pleading and Court Practice*

ST. GEORGE TUCKER BROOKE, LL.D., *Professor of Common and Statute Law*

WILLIAM P. WILLEY, A.B., A.M., *Professor of Equity Jurisprudence and Commercial Law*

J. RUSSELL TROTTER, A.M., PH.D., *Professor of Law*

CHARLES J. HOGG, *Instructor in Law*

URIAH BARNES, LL.B., *Assistant in Law*

HISTORY

The College of Law was established in 1878. Since then the growth of this department has kept pace with that of the University, of which it is a part, and now its attendance is comparatively large, having reached during the last year one hundred and eighteen students. The College of Law now occupies three commodious lecture rooms, a reading room, and a library, to which students have free access. In 1890 the moot court was introduced as a part of the regular law course.

LAW LIBRARY

The Law Library now contains about 5,000 volumes of well selected books. These consist of the official editions of the United States Supreme Court Reports, and the reports of the states of Massachusetts, New York, Pennsylvania, Virginia and West Virginia complete, and all of the other states to the Reporter System complete with the exceptions of Maryland, South Carolina, Maine, Rhode Island, Delaware, and New Hampshire. The Law Library also con-

tains the American Decisions, American Reports, Corporation Reports Annotated, Lawyers Reports Annotated, American Probate Reports Annotated, and a large number of well selected text-books. It is in charge of a competent librarian and is open to the students of the University from eight A. M., to five P. M., and from seven to nine P. M. In addition to this the dean of the College of Law has placed his own library, consisting of nearly twenty-three hundred volumes, in his lecture room, to which the students have free access. This is a well kept, up-to-date private library, containing a large number of text-books, digests, encyclopedias and reports. There is a complete set of the Reporter System, State and Federal, including those contained in the dean's room and in the Law Library.

Arrangements have been made whereby the use of these two libraries is extended to the lawyers of the State by the payment of a small annual fee, the proceeds thus derived to be expended in the purchase of law books, as the property of the State.

COURSES OFFERED IN THE COLLEGE OF LAW

1. A course leading to the degree of Bachelor of Laws
2. A course leading to a diploma of graduation in law
3. A course leading to the degree of Master of Laws

ADMISSION

1. Students upon registering in the College of Law shall declare their intention (a) to become candidates for the degree of LL.B., (b) for the diploma of graduation in law, or (c) to take a special course in preparation for the examination for admission to the bar.

2. To enter the course leading to the degree of Bachelor of Laws, the requirements are the same as the requirements to enter the College of Arts and Sciences. See page 47.

3. To enter the course leading to a diploma of graduation in law, the requirements are any ten of the fifteen preparatory units which may be offered for admission to the College of Arts and Sciences, provided that at least two of the units offered shall be in English.

4. For the course leading to the degree of Master of Laws, see page 170.

5. To enter upon a special course in preparation for the examination for admission to the bar, no requirements are imposed other than those stated in the following regulations:

REGULATIONS CONCERNING BAR STUDENTS

1. Students who enroll for the special course referred to above must be at least nineteen years of age.

2. Bar students will be required to follow and complete the courses selected by them with the same diligence and thoroughness as regular students.

3. Bar students may take the regular course examinations and receive, for the courses passed, credit for the bar examination, but no credit will be given for such courses toward a diploma or degree.

4. Any student who remains in the College of Law two full years or more and completes the whole law course will receive a certificate of that fact signed by the law faculty, and any student who requests it will receive from the law faculty a certificate showing the time he has spent in the College of Law and the subjects completed.

5. When students register as students preparing for the bar examination, they will not be permitted to change to the regular courses, except by the unanimous consent of the law faculty, and with the approval of the committee on classification and grades.

6. Bar students may become candidates for the diploma of graduation in the College of Law in accordance with rule 5, at any time previous to their completion of the two years' course in law, but in such cases they must complete their preparatory requirements at least six months before being recommended for the diploma.

CONDITIONAL ADMISSION

Students who have not had opportunity to make the preparation required for admission may enter the Preparatory School of the University and complete their preparation. If a student lacks no more than one unit of the necessary preparation, he may be admitted conditionally, and complete his preparation while carrying on some of the studies of the first year of the law course.

ADVANCED STANDING

A candidate for advanced standing in law may receive credit for such of the courses required in the junior year as he may be able to pass satisfactory examinations upon before the faculty of the College of Law. Application for such examinations must be made by the student at the time of his matriculation in the University. Such examinations are held once a year, namely, on the third, fourth, and fifth days of each fall quarter. These examinations are not open to students who have previously taken courses in the College of Law.

No student will be registered for any senior course in law who has not received credit for at least eight junior law courses; he must further produce a certificate from the committee on classification and grades that he has satisfied the academic entrance requirements; no credit for advanced standing will be given for any branches of the senior year, and no degree or diploma will be granted to any student who has not been in actual attendance upon the lectures during the whole of his senior year, nor will any student be admitted to the regular examination in any subject at the end of any quarter who has been irregular in attendance upon the lectures of that course.

DEGREES

BACHELOR OF LAWS

The degree of Bachelor of Laws will be conferred upon any student who satisfies all entrance requirements, and satisfactorily completes forty-two courses, of which twenty-two shall be courses in general culture, and twenty shall be in law. Of the twenty-two college courses the following are prescribed:

English.....10, 11, 39, and 40 or 41
Elocution..... 6
English history 20
American history.....21, 22, and 23
Economics.....1 and 4

The degree of Bachelor of Laws will also be conferred upon any student who satisfies all entrance requirements, and satisfactorily completes twelve courses in general culture and thirty courses in law. Of the twelve college courses the following are prescribed:

English history 20
American history.....22 and 23
English.....10 and 11

No candidate for the degree of Bachelor of Laws shall be allowed credit for any course in law until he shall have satisfied all entrance requirements, and shall have received credit for at least nine courses in academic work; nor shall any candidate for the degree of Bachelor of Laws be admitted to any senior class in law until he shall have received credit for all the academic work required for this degree. Graduates of the College of Arts and Sciences of West Virginia University, or other colleges or universities of recognized standing, and students who have taken the required number of courses in general culture at a recognized college or university are admitted immediately to the junior class, and may complete the course and receive the degree of Bachelor of Laws in two years.

MASTER OF LAWS

The degree of Master of Laws will be conferred upon the following conditions:

1. The candidate must have previously received the degree of Bachelor of Laws from this College of Law, or some other law school of equal grade.

2. He must pursue the study of law in residence at this university for at least three quarters.

3. He must complete to the satisfaction of the faculty of the College of Law ten courses in law.

DIPLOMA OF GRADUATION IN LAW

A diploma of graduation in law will be conferred upon any student who satisfies the entrance requirements to the course leading to the diploma, and passes satisfactory examinations in all the subjects taught in the College of Law.

CREDIT TOWARDS THE DEGREE OF BACHELOR OF ARTS

The courses in Constitutional Law, Persons and Domestic Relations and Real Property may be counted toward the degree of Bachelor of Arts.

EXAMINATION FOR ADMISSION TO THE BAR

It is made the duty of the law faculty by the laws of the state to examine all applicants for admission to practice law. These examinations are held at the University on the first Wednesday after the first day of January, the first Wednesday in April, and the last Wednesday in September, in each year.

The examinations cover the branches taught in the junior and senior years (the prescribed professional course) in the College of Law. The requirements for admission to these examinations are, that the applicant shall pay a fee of $5, and that he shall have studied law for two years either in private or at some law school. He must also file with the law faculty a detailed statement of the time, place, and extent of his academic schooling, including the branches of study, and if the faculty should be in doubt as to the sufficiency of these entrance requirements the applicant will be subjected to a special examination. In all cases, if lack of such elementary English education appears upon the face of the law examination papers, it will be considered a heavy discount from the value of the paper.

COURSES OF INSTRUCTION

There is no prescribed order in which a student in the four-year degree course must take the general culture courses above indicated, which are required in the freshman and sophomore years. Each student will arrange with his class officer at the beginning of each quarter as to the courses he will take during that quarter. The class officer will use his judgment in the assignment of studies. It is his duty to see that each student under his charge takes work which will be most beneficial.

The studies of the junior and senior years constitute the professional courses in law. These studies are all required, and must be taken in a designated order, unless special permission is obtained to vary that order. Students who are taking the two-year diploma course have the same studies as juniors and seniors in the four-year degree course.

The method of instruction consists of lectures, references to illustrative cases, examinations from approved text-books, quizes on lectures and the text, the drawing of the various legal papers requisite in the ordinary practice of the law, and practice in moot courts. There are oral examinations daily on the subjects of the lectures and the text-books used, and comprehensive written examinations on each topic or branch of law as completed.

The professional part of the regular law course is divided between the college quarters in such a manner that students may with advantage enter at the beginning of any quarter and complete and obtain credit for the branches taught during that quarter. The following schedule shows the division of the quarters and subjects during the junior, senior, and graduate years.

DISTRIBUTION OF WORK IN THE COLLEGE OF LAW

Junior Year

Hour	*Fall*	*Winter*	*Spring*
8:30	Persons and domestic relations 1	Real property 2	Real property 3
9:30	Contracts 4	Negotiable instruments and bailments 5	Evidence 10
10:30		Criminal procedure 12	
11:30	Criminal law 11	Insurance 6	Agency 7

Senior Year

9:30	Corporations 16	Constitutional law 18	Sales and partnership 9
10:30	Common law pleading 20		Wills and administration of estates 8
11:30	Equity pleading and and jurisprudence 14	Equity pleading and jurisprudence 15	Torts 13
2:00		Moot court 27	Moot court 28

Third or Graduate Year

9:30	Courts and officers 21	Court proceedings 25	Corporations 17
	Actions and suits 22	Court proceedings 26	Legal documents 24
	Actions and suits 23		Eminent domain 19
2:00		Moot court 29	Moot court 30

NOTE 1: Candidates who present twenty courses in law in satisfaction of the requirements for the degree of LL.B. may offer the third year courses as scheduled above in satisfaction of the requirements for the degree of LL.M.

NOTE 2: Students taking the third or graduate year in law will spend one hour each day in the lecture room, for instruction, assignment of work, and consultation. The remainder of the work required, amounting to about forty hours each week, will consist of individual work in the library and in preparation of briefs and reports. All of the work will be done under the direction of the Dean of the College of Law.

COURSES OFFERED IN THE COLLEGE OF LAW

1. **Persons and Domestic Relations.** Elementary law; nature of laws in general; rules for construction of statutes. Nature of relative rights; essentials of valid marriage; rights and disabilities of husband and wife; antenuptial and postnuptial settlements; separation and divorce; legitimacy of children and legitimation of bastards; rights of parents and children and their respective duties; guardian and ward; infants, persons non compotes metin and aliens; master and servant and their respective liabilities and rights as to each other and to third persons. Fall, 8:30; Mr. HOGG, 28 W.

2. **Real Property.** First six weeks, concise course in the principles of real property under the common law as laid down by Blackstone in his Commentaries; last six weeks, the law of real property as found in Tiedeman's text-book; including the nature of real property; fixtures; study of the different classes of estates with respect to quantity, time of enjoyment, and number of tenants.

Winter, 8:30; Mr. HOGG, 28 W.

3. **Real Property.** Completion of text, taking up uses and trusts, executory devises, requisites of a valid deed; methods of acquiring title, essentials of a valid will; title by adverse possession; prescription; and methods and forms of abstracting title to real estate.

Spring, 8:30; Mr. HOGG, 28 W.

4. **Contracts.** This is a comprehensive course, occupying a full term and covering the whole subject of contracts in theory and practice. The chief aim of this course is to enable the student to master the fundamental principles of this very practical branch of law, so that their application may be made easily and clearly in the varied forms that arise in practice. It deals minutely with all the essential elements in the formation of the contract, as well as the essentials to a valid discharge of its obligations.

Fall, 9:30; Professor WILLEY, 26 W.

5. **Negotiable Paper—Bailments.** A thorough demonstration of the principles which govern all kinds of negotiable instruments is given the student, and he is required to apply these principles in varied forms, and become familiar with their practical operation in business life. The subject of bailments covers all the various forms of bailments, but deals specifically with common carriers and their liability under all the conditions in which the passenger or shipper may seek to hold him responsible.

Winter, 10:30; Professor WILLEY, 26 W.

6. **Insurance.** History, nature and requisites of the contract: parties; insurable interest; the making of the contract; the consideration; consent of the parties; insurance agents and their powers; waiver and estoppel; rights under the policy; standard fire policy; terms of the life policy; marine insurance; accident insurance; guaranty, credit, and liability insurance.

Winter, 11:30; Professor TROTTER, 27 W.

7. **Agency.** The relation of principal and agent; the performance of the agent's powers and the delegation thereof; determination of the agency; construction of authority; rights and liabilities between

principal and third persons; rights and liabilities between agent and third persons; rights and liabilities between principal and agent.

Winter, 11:30; Mr. BARNES, 27 W.

8. **Wills and the Administration of Estates.** The instrument—form and contents; execution—signing and attestation; general requisites and validity; mental capacity; undue influence; revocation, revival and republication; probate and contest; construction and operation; legacies and devises; executors and administrators, their powers, duties, liabilities and compensation; distribution of the estates of decedents, including the payment of debts, legacies and distributive shares; settlement of estates.

Spring, 10:30; Dean HOGG, 27 W.

9. **Sales—Partnership.** These two important and difficult branches of commercial law conclude the senior course. A thorough discussion of the principles which govern contracts falling under these two heads is presented. Spring, 9:30; Professor TROTTER, 28 W.

10. **Evidence.** The subject of evidence is considered from two standpoints: first, the scientific method of searching for truth; secondly, the limitations for the production of evidence in a judicial inquiry.

Spring, 9:30; Professor WILLEY, 26 W.

11. **Criminal Law.** Definition, nature and punishment of crime; classification of crimes; the mental element in crime; persons capable of committing crimes, and exemptions from responsibility; parties concerned in the commission of crime; overt acts, attempts, solicitations, and conspiracy; offences against the person; against the habitation; against property; against public health, safety, comfort, and morals; against public justice and authority; against the public peace; against the government and the law of nations; jurisdiction and former jeopardy. Fall, 11:30; Mr. BARNES, 27 W.

12. **Criminal Procedure.** Apprehension of persons and property; prelimiary examination, bail, and commitment; the pleadings; the proof; trial and its incidents; proceedings after verdict; evidence.

Winter, 10:30; Mr. BARNES, 28 W.

13. **Torts.** Study of the text; lectures on torts; principles of liability; state, judicial, and executive acts; quasi judicial acts; parental and quasi parental authority; the remedies for torts; assault and battery, false imprisonment, injuries to family relations, defamation, fraud, malice, deceit, slander of title, malicious prosecution, etc.; duties regarding property, trespass, injuries to reversion, waste, con-

version; injuries between tenants in common, nuisance, negligence, etc.; special relations of contract and tort.

Spring, 10:30; Professor TROTTER, 28 W.

14. **Equity Jurisprudence.** This course comprises a thorough presentation of the origin and development of equity jurisprudence; the fundamental principles and maxims which constitute its foundation; the scope and limitation of its jurisdiction; the three principle divisions of equitable remedies, accident and mistake, fraud, and trusts; special jurisdiction, such as equitable liens, assignments, specific performance of contracts, and fiduciary obligations; reformation and cancellation of legal instruments, injunctions, etc.

Fall and Winter, 11:30; Professor WILLEY, 26 W.

15. **Equity Pleading.** Equity Pleading is carried along in conjunction with the subject of general jurisprudence, and alternating with it. The nature and object of pleadings in equity, the practical rules which are recognized by courts of equity in the United States, the modifications which have been made by statute in West Virginia, and the effect of the several pleadings in their relation to each other, are fully discussed. The aim is to cover the most practical part of the subject during the fall term, in order that the student may be ready for the work of the moot court, which begins at the opening of the winter term. Fall and Winter, 11:30; Professor WILLEY, 26 W.

16. **Corporations.** Definition and nature; creation and citizenship; effect of irregular incorporation; relation between the corporation and its promoters; powers and liabilities of corporations; relation to the state; dissolution; membership; management—officers and agents; rights and remedies of creditors; foreign corporations.

Fall, 9:30; Professor TROTTER, 28 W.

17. **Corporations.** Railroads, their organization, and the principles of law governing their operation; the organization and management of private corporations; the draft of corporate charters, by-laws, and other corporate papers; drafts of forms of stockholders' and directors' meetings, and of the proceedings usually occurring at such meetings. Lectures and individual work in the law library.

Spring; Dean HOGG, 27 W.

18. **Constitutional Law.** Definitions and general principles; the relation of the Federal Government to the states; establishment and amendment; construction and interpretation; the coordinate branches of government; federal executive; federal jurisdiction; powers of congress; executive, legislative, and judicial power in the states; the

police power; power of taxation; the right of eminent domain; civil rights and their protection; political and public rights; constitutional guaranties in criminal cases; laws impairing the obligation of contracts; retroactive laws. Winter, 9:30; Professor TROTTER, 28 W.

19. **Eminent Domain and Extraordinary Remedies.** By whom power of eminent domain may be exercised; what property may be taken and for what purposes; what constitutes a taking; compensation; condemnation proceedings; when titles to property taken passes; extent of interest acquired in property taken; remedies of the landowner; habeas corpus; mandamus; prohibition; certiorari; quo warranto; injunction. Lectures and individual work in the law library.
Spring; Dean HOGG, 27 W.

20. **Common Law Pleading.** Forms of action; parties to actions; proceedings in the action including process, appearance, profert and demand of oyer, amendment, trial of the issue, demurrer to evidence, the verdict, proceedings after verdict, bills of exceptions, new trial, motion in arrest of judgment, the judgment, execution; the declaration, including the statement of the cause of action in general and special assumpsit, debt and other actions; the demurrer; the general issue, its nature and use in the various forms of action; special pleas in bar; pleas in abatement; the rules relating to pleading, such as materiality, unity, certainty and consistency. The course will cover the entire subject of common law pleading and the modifications produced by staute and the more liberal principles of modern procedure.
Fall, 10:30; Dean HOGG, 27 W.

21. **Courts and Their Officers.** State decisis; res judicata; sources of judicial power; the Supreme Court of Appeals and its jurisdiction, original and appellate; the circuit courts and their jurisdiction, original and appellate; the county courts and their jurisdiction; inferior courts, civil and criminal, and their jurisdiction; the officers of the courts, including attorneys at law, their powers, duties and liabilities. Lectures and individual work in the law library.
Fall; Dean HOGG, 27 W.

22. **Actions at Law and Suits in Equity.** Parties to actions and suits, in general; parties plaintiff and defendant, including many specific classes of cases; proceedings by and against lunatics and infants. Lectures and individual work in the law library.
Fall; Dean HOGG, 27 W.

23. **Actions at Law and Suits in Equity.** The nature and forms of actions at common law, and as modified by statute; issuance,

service and return of process; the rules; change of venue; removal of causes from a state to a Federal court; the demurrer; pleas. Lectures and individual work in the law library. Fall; Dean HOGG, 27 W.

24. **Draft of Legal Documents.** Contracts; preparation of abstract of title; pleadings of all kinds; briefs; deeds, mortgages, leases, wills, and various other legal forms; annotation of these documents. Lectures and individual work in the law library.

Spring; Dean HOGG, 27 W.

25. **Court Proceedings.** Abatement and revival of actions and suits; continuances; production of books, papers and documents for use upon trial; competency of witnesses; admissibility of evidence; documentary evidence,—public records, private writings, deeds and other documents; expert witnesses; the jury. Lectures and individual work in the law library. Winter; Dean HOGG, 27 W.

26. **Court Proceedings.** The opening and closing of the case, as to the introduction of the evidence and the argument of counsel; examination of witnesses; impeachment of witnesses; objections and exceptions to evidence; argument of counsel before the jury; the verdict; the setting aside of the verdict; the judgment and its enforcement. Lectures and individual work in the law library.

Winter; Dean HOGG, 27 W.

27. **Moot Court.** This course supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial tables. In the moot court, he is taught to apply legal remedies according to the common law and chancery system of practice; to bring suits, draw papers, pleadings, briefs, etc., to take the various steps incident to bringing a cause to trial, and to try it according to the rules of evidence, including the argument, charge, verdict, motion in arrest of judgment, writ of error, etc. The court is organized in all its details in strict conformity to the practice of the regular courts. The students themselves act respectively as counsel, jurors, witnesses, and officers of the court, thus learning by actual doing all the forms of court practice. The circuit moot court is held by the Dean as the judge thereof. The grammatical accuracy, rhetoric, elocution, and courtesy of deportment of students, also come under review of the judges, and the young men are thus fitted to appear and conduct themselves at the bar as gentlemen and scholars, as well as lawyers. There is a supreme court of appeals, composed of all the instructors, the Dean sitting as president of the court, to which all appeals from decrees and writs of error to judgments rendered in the circuit court, may be taken. The

system gives the student practice in all the courts, following his case from the circuit court where it is brought, to the supreme court of appeals.

Winter, 2:00; Dean HOGG, 27 W.

28. Moot Court. Continuation of preceding course.
Spring, 2:00; Dean HOGG, 27 W.

29. Moot Court. Continuation of preceding course.
Winter, 2:00; Dean HOGG, 27 W.

30. Moot Court. Continuation of preceding course.
Spring, 2:00; Dean HOGG, 27 W.

NON-PROFESSIONAL LECTURES

Lectures, exclusive of the regular course, to be delivered during the year 1909-10.

The Law of Taxation, with special reference to West Virginia, by Hon. W. M. O. Dawson, ex-Governor of West Virginia.

Inter-state Commerce Law, by Hon. John W. Davis, of the Clarksburg bar.

History and Jurisdiction of Virginia and West Virginia Courts, and biographic sketches of some of the early Virginia and West Virginia judges and lawyers, by Hon. John W. Mason, Judge of the Fourteenth West Virginia Circuit.

Appellate Court Practice, by Hon. Frank Cox, late a member of the Supreme Court of Appeals of West Virginia.

PROFESSIONAL ETHICS

Beginning with the school year of 1907-8, the faculty of law instituted a course of lectures on professional ethics, consisting of nine different topics, designed to extend through the entire year. These lectures are delivered monthly to all the students of the College of Law, and are made a part of the regular course of instruction. Three of the lectures are delivered by the members of the law faculty, and the other six by prominent lawyers selected from the bench and bar of the State. The following are the topics in this course; The Study of the Law; The Integrity of the Legal Profession; Relation of the Lawyer to the Court; Relation of the Lawyer to his Client; The Lawyer's Relation to the Members of his Profession; Contingent Fees; Advocacy; The Lawyer in General Practice; The Lawyer's Compensation.

In addition to these lectures the Dean of the College of Law will present to the law classes the substance of the Codes of Ethics adopted by the State Bar Associations of Alabama, Colorado, Georgia, Kentucky, Maryland, Michigan, Missouri, North Carolina, Virginia, Wisconsin and West Virginia, as prepared and published by the Committee on the Code of Professional Ethics of The American Bar Association.

SUMMER LAW SCHOOL

Arrangements are now being made to give a course of law lectures during the summer of 1909, and in all subsequent years until further notice. These lectures will include pleading, practice and evidence; the law of corporations, with special reference to this law as administered in West Virginia; the law of wills, including the form, attestation, probate, construction and contest of wills.

To make the summer school available to all classes of students, there will also be a course of lectures on the general outlines of American law, including all its different branches, designed to give the student a familiar introduction to the principles of the law, as taught in the various courses leading to the degree of Bachelor of Laws, as required by the present course of study.

TEXT-BOOKS

The text-books used in the College of Law are carefully selected and are such as will be useful to the student throughout his professional career. They are all kept at the University, and sold to the student at a discount from the regular prices. They are as follows:

Blackstone's Commentaries
Clark on Contracts
Elliott on Insurance
Clark on Criminal Law
Clark on Criminal Procedure
Norton on Negotiable Paper
Hale on Bailments
Tiffany on Agency
Black's Constitutional Law
Shipman's Common Law Pleading
Shipman's Equity Pleading
Brooke's Notes on Pleading and Practice in West Virginia
Clark on Corporations
Eaton's Equity
Tiedeman on Real Property
Minor on Conflict of Laws

Cooley on Torts
Greenleaf on Evidence
Tiffany on Sales
George on Partnership
Tiffany on Persons and Domestic Relations

For use in the moot court on points of pleading and practice, for forms of orders, judgments, and decrees, and as books of general reference on the subjects of which they treat, the following have been adopted:

Hogg's Pleading and Forms (third edition)
Hogg's Equity Principles
Hogg's Equity Procedure
Hogg's Treatise and Forms
Willey's Procedure in the Courts of Law and Equity

THE COLLEGE OF MEDICINE

THE FACULTY

IN MORGANTOWN

DANIEL BOARDMAN PURINTON, LL.D., *President*

JOHN NATHAN SIMPSON, A.B., M.D., *Professor of Anatomy and Physiology and Head of the Medical Faculty*

ALEXANDER REID WHITEHILL, Ph.D., *Professor of Chemistry*

ALBERT MOORE REESE, Ph.D., *Professor of Zoology*

JOHN LEWIS SHELDON, Ph.D., *Professor of Botany and Bacteriology*

JUSTIN FRANK GRANT, Ph.B., M.D., *Professor of Anatomy and Pathology*

FREDERICK LAWRENCE KORTRIGHT, D.Sc., *Professor of Chemistry*

CHARLES EDGAR HOGG, LL.D., *Professor of Law*

IN BALTIMORE

The Faculty of the College of Physicians and Surgeons

FACILITIES FOR INSTRUCTION

Experience has shown that a university which possesses laboratories well equipped for scientific work, offers opportunities to medical students superior to those offered by a medical school separate from a university. It has also been shown that the studies of the first two years of the medical course, which consist of non-technical science work, are pursued to much better advantage in the atmosphere of scientific research which prevails at a university. For these reasons the University offers the first two years of the medical course under such conditions that the student may take the technical courses and clinical work at some of the medical schools in large cities where the best hospital facilities are provided. For the first two years' work all the facilities of the laboratories of the University are open to medical students. This, together with the low cost of tuition and

living, and the opportunities for general culture, places the student in the most desirable conditions for the study of medicine.

Under the anatomical law, there is supplied an abundance of material for dissection, and no expense is spared to secure the best material for the study of histology, embryology, bacteriology, pathology, etc. In the laboratories, each student has the use of a separate microscope and all the necessary apparatus and materials are placed in the hands of the student, so that he may learn their use for himself.

In the library there is a large collection of the best medical text and reference books, which is constantly being increased. The libraries of the allied scientific departments contain the most important books and current publications.

THE COMBINED SCIENTIFIC AND MEDICAL COURSE

This course is intended to give the student a thorough training in culture and science studies as a preparation for the study of medicine. It is so arranged that the graduate can enter the third year of most of the higher grade medical colleges. This plan enables the student to secure the B.S. and M.D. degrees in six years. The whole trend of medical education in recent years has been toward the adoption of such a course as the most desirable in every way for the future practitioner.

REQUIREMENTS FOR ADMISSION

The requirements for admission to this course are the same as for admission to the course leading to the degree of Bachelor of Science in the College of Arts and Sciences (see page 47). It is strongly recommended that the student shall present for entrance two years of French or German, or two years of laboratory science (physics, chemistry, botany, zoology).

COURSES OF STUDY

The student will register as a candidate for the B.S. degree and will take as his major subject one of the sciences prescribed in the course. He will pursue his course in accordance with the rules governing students in the College of Arts and Sciences. When he shall have completed the following course of study, he will be granted the degree of Bachelor of Science, and after he has successfully completed the prescribed medical course in an approved medical college, he may have conferred upon him the degree of Doctor of Medicine from this University.

DISTRIBUTION OF WORK FOR THE B.S. AND M.D. DEGREES

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	Zoology 1	Zoology 2	Zoology 3
9:30	German 1 or French 1	German 2 or French 2	German 3 or French 3
10:30	English 10	English 11	
11:30	Solid geometry 7	Univ. algebra 8	Plane Trigonometry 9

Second Year

8:30	German 4 or elective	German 5 or elective	German 6 or elective
9:30	French 1 or elective	French 2 or elective	French 3 or elective
10:30	Zoology 6	Zoology 7	Zoology 8
11:30	French 4	French 5	French 6
1:30			Physics 4

(Either German 4, 5, and 6, or French 4, 5, and 6 are to be taken.)

Third Year

8:30		Pharmacology 1	Pharmacology 2
9:30	Chemistry 1	Chemistry 2	Chemistry 3
10:30		Physiology 3	Physiology 4
11:30	Osteology	Anatomy quiz	Anatomy quiz
1:30	Histology	Dissection	Dissection, 6 weeks Neurology, 6 weeks

Fourth Year

8:30	Bacteriology		
9:30	Physiology 5	Chemistry 11	Chemistry 12
10:30–11:30	Embryology	Pathology 1	Pathology 2
1:30 to 4:00	Bacteriology laboratory	Dissection and quiz	Dissection, 6 weeks Phys. diag., 6 weeks Med. jurisprud.

THE FOUR-YEAR MEDICAL COURSE

This course is designed to meet the needs of those who can spend only four years on their medical course. Although students are earnestly advised to take the six-year course, the shorter course is arranged to give the best possible training in the time at the student's command. By affiliation with the College of Physicians and Surgeons in Baltimore, the laboratory courses constituting the first two years

of the medical course may be done in Morgantown and the clinical work of the third and fourth years will be done in Baltimore. Students go from their work in Morgantown to Baltimore without further examination.

The College of Physicians and Surgeons is one of the best equipped medical schools in the East, and numbers among its alumni some of the foremost practitioners of our state. The college is in its thirty-fifth year. Its buildings are thoroughly adapted to all the requirements of a modern medical school. Its clinics are very large and varied, and its faculty includes some of the most prominent men in Baltimore.

Clinical facilities are furnished by the Baltimore City Hospital, the Hospital for the Colored Race, the Bay View Hospital (with two thousand beds), the Nursery and Child's Hospital, the Lying-in Hospital, and the City Hospital Dispensary, where 25,000 patients are treated annually. The College also conducts a Pasteur Institute for the treatment of hydrophobia.

Students who take the first two years' work of the medical course in Morgantown will, upon completing the course, receive their diploma from the College of Physicians and Surgeons, but the degree will also be conferred at Morgantown, and the students will be considered alumni of West Virginia University.

THE WOMAN'S MEDICAL COLLEGE OF BALTIMORE

Arrangements upon the same terms as those above described have been made with the Woman's Medical College of Baltimore, so that women who take their first two years' work in this University may complete the course in Baltimore.

REQUIREMENTS FOR ADMISSION

Candidates for admission to this course must present either:

a. A bachelor's degree from an approved college or university,

b. A certificate from an accredited high school, normal school, or academy, which requires for graduation not less than four years of study, embracing the following number of courses:

	Units
Foreign language (one year must be in Latin)	3
Mathematics (Algebra and Plane Geometry)	2
English	2
History	1
Science (physics, chemistry, botany, zoology, with laboratory)	2

Elective in language, literature, history, or science.....	5
Total	15

c. A certificate of examination from a state superintendent of public instruction on the subjects prescribed by the Association of Medical Colleges.

"After September 1, 1910, candidates for admission to the College of Medicine must offer, in addition to the present entrance requirements, one year of college work done either in the College of Arts and Sciences of West Virginia University or in some other college of equal rank; or work equivalent thereto."

These requirements are fully equivalent to those prescribed by the Association of American Medical Colleges of which this college is a member.

CONDITIONAL ADMISSION

Students who have not had opportunity to make the preparation required for admission may enter the Preparatory School of the University and complete their preparation. If a student lacks no more than three courses of the necessary preparation, he may be admitted conditionally, and complete his preparation while carrying on some of the studies of the first year of the medical course. No student may enter any courses of the second year until all preparatory conditions have been removed.

DISTRIBUTION OF WORK FOR FOUR-YEAR MEDICAL STUDENTS

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30		Pharmacology 1	Pharmacology 2
9:30	Chemistry 1	Chemistry 2	Chemistry 3
10:30		Physiology 3	Physiology 4
11:30	Osteology	Anatomy quiz	Anatomy quiz
1:30	Histology	Dissection	Dissection, 6 weeks Neurology, 6 weeks

Second Year

8:30 9:30	Physiology 5 Bacteriology	Pathology 2	Pathology 3
10:30 11:30	Embryology	Physiological chemistry 11	Physiological chemistry 12
1:30 4:00	Bacteriology laboratory	Dissection	Dissection, 6 weeks Physical diagnosis, 6 weeks Medical jurisprudence

Third Year, Given in Baltimore

Surgery, Obstetrics, Gynecology, Medicine, Pediatrics, Therapeutics, Diseases of nervous system, Diseases of eye and ear, of stomach, Dermatology, Physical diagnosis, Genito-urinary surgery, Surgical anatomy, Disease of nose and throat, Diseases of blood and urine.

Fourth Year, Given in Baltimore

Surgery, Orthopedic surgery, Operative surgery, Rectal surgery, Medicine, Obstetrics, Gynecology, Hygiene, Mental diseases, Genito-urinary surgery, Pediatrics, Nose and throat, Diseases of nervous system, Diseases of stomach, eye, and ear.

COURSES FOR PHYSICIANS

Any of the courses offered in the College of Medicine are open to physicians upon the payment of the same fees as other students. Special courses in dissecting, bacteriology, and pathology will be arranged when there is sufficient demand for them.

FEES

A fee of five dollars will be deposited by each student taking a course in gross anatomy to cover possible loss of materials loaned to students for study at their rooms. Whatever remains of the fee will be returned at the close of the year.

The following fees are charged to cover cost of materials used:

$1.00 per course in Histology
$3.00 per course in Bacteriology
$5.00 for each part dissected in Anatomy
$3.00 per course in Embryology
$3.00 per course in Pathology
$2.00 per quarter in General chemistry
$10.00 per quarter in Medical organic chemistry

DEPARTMENTS OF INSTRUCTION

For the announcement of the full course in medicine students are referred to the catalogues of the College of Physicians and Surgeons of Baltimore. The following is the announcement of the work offered in Morgantown.

ANATOMY

Professor Grant

1. **Osteology.** Study of bones and joints. Lectures, demonstrations, and quizes. Fall, 1 W.

2. **Dissection.** Careful dissection of the body with reference to nerves, blood vessels, and muscles. The cadaver is divided into three parts, each student dissecting an arm, a leg, including the abdominal viscera, and the head, including the thoracic viscera. For each part a fee of five dollars is charged. Winter, Anatomical Laboratory.

3. **Dissection.** Continuation of course 2.
Spring, Anatomical Laboratory.

4. **Dissection and Quizes.** Continuation of course 3.
Winter, 1:30—4:00 p. m.; Anatomical Laboratory.

5. **Dissection and Quizes.** Continuation of course 4.
Spring, 1:30—4:00 p. m.; Anatomical Laboratory.

CHEMISTRY

Professor Whitehill and Professor Kortright

1. **Inorganic Chemistry.** Experimental lectures, laboratory work, and recitations.
Fall, first section, 9:30; second section, 11:30; Spring, 10:30; Professor Whitehill, 20 S.

2. **Inorganic Chemistry.**
Winter, first section, 9:30; second section, 11:30; Fall, 10:30; Professor Whitehill, 20 S.

3. **Organic Chemistry.** Lectures, laboratory work, and recitations.
Spring, first section, 9:30; second section, 11:30; Professor Whitehill, 20 S.

11. **Medical Organic Chemistry.** A lecture and laboratory course in special subjects of organic chemistry, as carbohydrates, fats, proteids, and foods in general.
Winter, 10:30-12:30; Professor Kortright, 21 S.

12. **Medical Analysis.** The study and practice of the analytical methods used in modern medicine.
Spring, 10:30-12:30; Professor Kortright, 21 S.

EMBRYOLOGY AND COMPARATIVE ANATOMY

Professor REESE

Students who elect embryology and comparative anatomy as the major subject in candidacy for the B.S. degree will be expected to take course 9 in the second year. Course 1 is prerequisite to all other courses except course 14.

1. **Animal Biology.** Three lectures and four hours' laboratory work per week. Fall, Monday, Wednesday, and Friday, 8:30; 17 W.

2. **Vertebrate Zoology.**
Winter, Monday and Wednesday, 8:30; Tuesday, Wednesday, and Thursday, 1:30; 17 W.

3. **Vertebrate Zoology.** Continuation of course 2.
Spring, Monday and Wednesday, 8:30; Tuesday, Wednesday, and Thursday, 1:30; 17 W.

6. **Mammalian Embryology.** Prerequisite, courses 2 and 3.
Fall, 10:30-12:30; 17 W.

7. **Vertebrate Neurology.** Prerequisite, courses 1, 2, 3, and 6.
Spring, hours to be arranged; 17 W.

8. **Vertebrate Neurology.** Continuation of course 7.
Spring, hours to be arranged; 17 W.

9. **Methods in Embryology, Histology and Neurology.**
Hours to be arranged; 17 W.

14. **The Human Brain.** A short course open only to four-year medical students. Lectures once a week; laboratory work afternoons during the second half of the spring quarter.
Winter and Spring, 11:30; 17 W.

The above courses are more fully described in the announcement of Zoology in the College of Arts and Sciences, page 104.

MEDICAL BACTERIOLOGY

Professor SHELDON

4. This is a practical laboratory course supplemented by lectures and recitations. Each student will become familiar with methods of sterilization and disinfection, the preparation and use of culture media,

the morphology and life history of the more important non-pathogenic and pathogenic bacteria and the pathogenic protozoa, and the bacterial analysis of air, soil, water, and milk.

Fall, lectures and recitations, 8:30; laboratory work, 1:30; 1 W.

PHYSIOLOGY

Professor SIMPSON

1. **Elementary Physiology.** Cells, tissues, and organs of the human body and their functions, using the microscope freely; practical demonstrations in digestion, etc. Fall, 10:30; Spring, 9:30; 1 W.

2. **Elementary Physiology.** Continuation of course 1, with demonstration on animals. Fall, 8:30; Winter, 9:30; 1 W.

3. **Advanced Physiology.** Muscle, nerve, the central nervous system, special senses. Lectures, demonstrations, and quizes. For medical students. Text-book, Howell. Winter; 10:30; 1 W.

4. **Advanced Physiology.** Continuation of course 3. Special senses; blood and lymph. Text-book, Howell. Spring, 10:30; 1 W.

5. **Advanced Physiology.** Continuation of course 4. Respiration; digestion and secretion, nutrition, heat production and regulation; reproduction. Fall, 9:30; 1 W.

PHARMACOLOGY

Professor SIMPSON

1. **Origin and use of Drugs.** Their preparation and dosage. Winter, 8:30; 1 W.

2. **Study of the Action of Drugs on Lower Animals.** Lectures and quizes. Spring, 8:30; 1 W.

MEDICAL JURISPRUDENCE

Professor HOGG

A course of eighteen lectures, covering the medico-legal aspect of medicine. Open to medical and law students.

Spring, hours to be arranged.

MICROSCOPIC ANATOMY

Professor GRANT

1. **Normal Histology.** A microscopic study of the different organs and tissues of the human body and of animals. Fall, 1:30; S. F.

2. **Pathology.** Gross and microscopic study of diseased tissue, organs and new growths; the more common tumors. Prerequisite, Anatomy 1 and Medical bacteriology. Winter, 8:30; 1 W.

3. **Pathology.** Continuation of course 2. Spring, 8:30; 1 W.

PHYSICAL DIAGNOSIS

Professor SIMPSON

This is a six weeks' course in regional anatomy designed to acquaint the student with methods of examining patients.

Spring, hours to be arranged; 1 W.

TEXT-BOOKS

Anatomy, Gray or Morris
Histology, Piersol or Boehm-Davidhoff-Huber
Embryology, Reese
Physiology, Howell
Chemistry, Remsen
Bacteriology, Muir and Ritchie, Frost
Pathology, Delafield and Prudden, McFarland, Green-Bosquet
Pharmacology, Sollman, H. C. Wood
Physiological Chemistry, Simon
Dictionaries, Dorland, Gould

THE DEPARTMENT OF MILITARY SCIENCE AND TACTICS

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

HARRY A. EATON, Captain 23rd U. S. Infantry, *Commandant of Cadets and Professor of Military Science and Tactics*

THE CADET CORPS

Extracts from the Military Law, State of West Virginia, 1901, sec. 100:—"The Corps of Cadets of the West Virginia University shall be held as the Training School of the West Virginia National Guard, subject to such duty as the Commander-in-chief may order."

Jan. 19, 1903:—"Each member of the Senate shall be entitled to appoint one cadet from his district, on or before the first day of June in the second year of his term, and one cadet on or before the first day of June in the fourth year of his term. Each member of the House of Delegates shall be entitled to appoint one cadet from his county on or before the first day of June next preceding the end of his term. In case a cadetship filled by appointment by any member of the Legislature shall become vacant, the member making the appointment, or his successor, shall fill the same by a new appointment within the limits of the time aforesaid. But no Senator or Delegate shall appoint any cadet until he receives a certificate from the President of the University, or the Commandant of Cadets, giving him notice of his right to do so; and he shall not have the right to exercise such power of appointment as long as two cadets are accredited to himself and his predecessor, either by original appointment or by re-enlistment. All other cadets necessary to make up the full complement of the corps shall be appointed by the regents, in proportion to their number, including vacancies, if any, caused by the failure of any member of the Legislature to fill his appointment. Cadets shall not be under sixteen years of age, and shall not be

over twenty-two years of age. Their appointment shall be made upon undoubted evidence of good moral character and sound physical condition. Their term of enlistment shall be four years, but any cadet, at the expiration of his first term, shall be entitled to re-enlist for the further term of two years, upon giving notice of his intention to the Commandant of Cadets at least thirty days before the expiration of such term. But not more than fifteen cadets shall be appointed from any Senatorial district, and not more than eight from any one county."

State cadets to the number of 225 are appointed to the University, and receive their uniforms, books, stationery, tuition, use of library, use of arms and equipments, and ammunition for target practice, free. They constitute the public guard of the University and of the public property belonging thereto. Application for an appointment should be made to one of the regents of the University or to a member of the Legislature.

Students of the University who desire military instruction, and who are not state cadets, are allowed to join the corps as volunteer cadets. They receive no uniform from the state.

All cadets are required to wear a neat-appearing gray uniform at drill. This uniform may be worn with propriety on all occasions.

An officer of the regular army is specially detailed by the President of the United States to act as Commandant of Cadets. The inspection of the cadet corps is made by an officer of the General Staff of the Army.

SPECIAL REWARDS FOR MILITARY EXCELLENCE

The names of the three most distinguished cadets of the graduating class are published annually in the Army Register. One of these three may be designated each year to take the examination for commission in the Regular Army.

All graduates of the Military Department are eligible, within five years after graduation, to commissions as first lieutenant in the West Virginia National Guard, without examination.

ARMORY

The Armory (60 by 120 feet) is used as a drill hall during inclement weather. This building is the home of the cadet corps, and all entertainments given by them are held therein, under the supervision of the Commandant of Cadets.

ADMINISTRATION AND INSTRUCTION

For the purpose of administration and drill the cadet corps is organized as an infantry battalion.

Cadets are divided into sections, corresponding to their military proficiency and length of service. New cadets are required to enter the fourth (lowest) section, but those who have had previous military instruction may be transferred to a higher section upon passing a satisfactory examination.

The work in the Military Department is taken in connection with other University work, and requires about four hours each week. The course of instruction is intended to fit all who graduate therein to perform efficiently the duties of officers in the National Guard of West Virginia. In addition to technical knowledge, the cadets are taught patriotism, punctuality, obedience, attention, alertness, and neatness, qualities which go toward making a good citizen as well as a good officer. The winter quarter is devoted to theoretical instruction in tactics and other military subjects, together with practical instruction in drill and in gymnastics. A course of lectures in military hygiene is also given.

Infractions of discipline are referred to a court-martial, consisting of cadet officers.

PHYSICAL TRAINING

The regular course in physical training occupies four years, and is required of all members of the cadet corps unless excused for sufficient reasons.

A regulation suit is required. This suit consists of a black quarter-sleeve jersey, black knee tights, long black stockings, and white gymnasium shoes.

COURSE OF INSTRUCTION

The instruction of the various sections is as follows:

Fourth Section

Practical Instruction: (a) Infantry drills in school of the soldier, squad, company, and battalion; extended order and ceremonies. (b) Guard duty as a sentinel. (c) Physical training in the gymnasium.

Theoretical Instruction: (a) Infantry Drill Regulations, paragraphs 1 to 248, and 502 to 601, inclusive. (b) The Manual of Guard Duty except paragraphs 331 to 373, inclusive. (c) The explanation of Cadet Regulations and General Orders, and the care of arms and accoutrements.

Third Section

Practical Instruction: (a) Infantry drills, same as fourth section, except in school of the soldier. (b) Guard duty as sentinels and non-commissioned officers of the guard. (c) Physical training in the gymnasium.

Theoretical Instruction: (a) Infantry Drill Regulations. (b) Manual of Guard Duty.

Second Section

Practical Instruction: (a) Infantry drills, same as third section. (b) Small Arms firing, including the position and aiming drills, gallery practice, and range firing. (c) Guard duty, same as third section.

Theoretical Instruction: (a) Infantry Drill Regulations. (b) Small Arms Firing Regulations. (c) U. S. Army Regulations.

First Section.

Practical Instruction: (a) Infantry—duties of grade attained. (b) Guard duty—of grade attained. (c) Courts-martial. (d) Fencing.

Theoretical Instruction: (a) Field Service Regulations. (b) Minor Tactics, including advance and rear guards, marches, fortifications, camping, etc. (c) Military Law.

BAND

A band of thirty-two musicians is authorized by the Board of Regents. Band cadets are volunteer cadets. They receive the same allowances as state cadets and are governed by the same rules and regulations. They receive free of charge, tuition, uniform, books, stationery, and instruction in band music. They are exempt from gymnasium work. They are required to be instructed in military drill to include the school of the soldier and of the squad.

INFORMATION FOR APPLICANTS FOR APPOINTMENT TO THE CADET CORPS

1. The applicant must not be under sixteen nor over twenty-two years of age.

2. He must be a bona fide resident of West Virginia.

3. He must be sound physically, of good moral character, and able to pursue successfully the studies of the first year of the Preparatory School.

4. He must make a deposit of $20.00 with the treasurer of the University as a guaranty that the state arms, etc., in his possession will be taken care of. The deposit will be returned to him at the end of his enlistment of two years, upon satisfactory settlement with the quartermaster.

5. He must make an average grade each term of not less than sixty on a scale of one hundred, in order to hold his appointment.

6. Cadets are furnished with uniforms, text-books, and stationery free of charge. They pay no matriculation, tuition, or contingent fees to the University. If they are graduated from any department of the University while members of the cadet corps, they are allowed to retain their text-books.

7. The work of the corps does not interfere with the student's scholastic duties. Cadets may take courses in any of the departments of the University.

8. A young man desiring an appointment should apply to the regent for his county, or to a member of the Legislature representing his county. The counties of the state are divided as follows by the Board of Regents for the purpose of cadet appointments:

Regent L. C. ANDERSON—Mercer, Raleigh, Wyoming, McDowell, Mingo, Greenbrier, Summers, Pocahontas.

Regent C. E. HAWORTH, Huntington, W. Va.—Cabell, Wayne, Lincoln, Logan, Boone, Putnam, Mason.

Regent C. M. BABB, Morgantown, W. Va.—Berkeley, Morgan, Hampshire, Hardy, Mineral, Grant, Jefferson.

Regent D. C. GALLAHER, Charleston, W. Va.—Kanawha, Fayette, Nicholas, Clay, Roane, Monroe.

Regent F. P. MCNELL, Wheeling, W. Va.—Hancock, Brooke, Ohio, Marshall, Marion.

Regent Z. T. VINSON—Webster, Braxton, Randolph, Lewis, Upshur, Tucker.

Regent T. P. JACOBS, New Martinsville, W. Va.—Wetzel, Tyler, Harrison, Pleasants, Ritchie.

Regent J. B. FINLEY, Parkersburg, W. Va.—Doddridge, Gilmer, Wirt, Wood, Jackson, Calhoun.

Regent E. M. GRANT, Morgantown, W. Va.—Taylor, Preston, Monongalia, Barbour, Pendleton.

9. Students who have cadet appointments should upon their arrival at the University present themselves at the office of the Commandant, in the armory, and obtain the necessary information about registering, etc.

MILITARY GRADUATES AND DISTINGUISHED CADETS

Reported at Commencement June, 1908

The following are the names of the distinguished cadets whose names will appear in the United States Army Register for 1909:

First Section

Cadet Captain Roy B. Hall, Co. B.
Cadet First Lieutenant William R. Thacher, Co. A.
Cadet First Lieutenant John P. McJilton, Quartermaster.

The following are announced as distinguished cadets in accordance with paragraph 82, Cadet Regulations:

Second Section

Cadet Sergeant Percy Hall, Co. A.
Cadet Sergeant Hugh C. Barnes, Co. B.
Cadet Sergeant Oscar F. Gibbs, Co. B.

Third Section

Cadet Sergeant Carl R. Sydenstricker, Co. A.
Cadet Corporal Robert W. Buchanan, Co. A.
Cadet Sergeant Morris C. Burnside, Co. A.

Fourth Section

Cadet Private Harry G. Wheat, Co. A.
Cadet Private Brown McDonald, Co. B.
Cadet Private Charles G. Baker, Co. B.

The following named cadets, having completed the course of instruction, are announced as graduates of the Department of Military Science and Tactics:

1. Hall, Roy O.
2. Thacher, William R.
3. McJilton, John P.
4. Reynolds, Harris A.
5. Hall, Willie G.
6. Ward, Randall C.
7. Hanna, James A.

Upon decision of the judges, the cadet colors for the ensuing year are awarded to Co. B.

The medals offered by the Board of Regents are awarded as follows:

(1) Gold medal for drill and discipline, to Cadet Sergeant George W. Grow, Co. B.

(2) Silver medal for highest score at target practice, to Cadet Sergeant Oscar F. Gibbs, Co. B.

(3) Silver medal for second highest score at target practice, to Cadet Sergeant Claude S. Tetrick, Co. B.

(4) The sabre and belt presented by S. D. Hirschman & Co. to the Captain of the best drilled company, to Cadet Captain Roy O. Hall, Co. B.

ROSTER OF CADETS

FIELD AND STAFF

Harry A. Eaton,	Capt. 23rd U. S. Infantry, Commandant
Roy O. Hall,	Major
Halleck M. Scott,	Captain
John C. Evans,	First Lieutenant Adjutant
George W. Grow,	First Lieutenant Quartermaster

Non Commissioned Staff

Thomas L. Harris,	Sergeant Major
Carl R. Sydenstricker,	Quartermaster Sergeant
Homer A. Hoskins,	Ordnance Sergeant
Enoch Smith,	Chief Trumpeter

BAND

Walter A. Mestrezat,	Chief Musician
Clyde Pitzer,	Principal Musician

Sergeants

1. George G. Crewson	2. Homer B. Hinds
3. Ward H. Spenser	4. Harry L. Stilphin

Corporals

1. Arthur A. Brindley	2. Leroy P. Holloway
3. Julius H. Hefke	4. Voorhees C. Collins
5. Harry W. Sheets	6. Lee F. Everhart
7. Benjamin H. Moffatt	8. Ira C. Henderson

Privates

Bennett, C. M.
Beaumont, J. H.
Bradley, W. B.
Brownwell, G. E.
Casler, F. G.
Cronin, D. A.
Gould, F. E.
Kennedy, J. W.
McDaniel, F. M.
Miller, M. O.
Reynolds, H. A.
Shepperd, C. C.
Starbuck, T. W.
Sperling, H. E.
Wilhelm, Don

COMPANY "A"

Oscar F. Gibbs, Captain
Boyd Randall, First Lieutenant
Walter W. Point, Jr. Second Lieutenant
Harry G. Wheat, First Sergeant

Sergeants

1. L. E. Sydenstricker
2. E. L. Colcord
3. W. E. Simpson
4. G. G. Means

Corporals

1. W. E. Cather
2. R. M. Musick
3. A. R. Ross
4. R. W. Evans

Howard C. Brown, Musician

Privates

Allen, J. C.
Bernstein, L. J.
Burnside, G. H.
Burrell, L. G.
Core, A. L.
Davidson, J. W.
Evans, E. E.
Felton, A.
Fisher, M. DeW.
Glover, W. H.
Gorman, K. H.
Grogg, R. C.
Guthrie, J. K.
Harless, F. H.
King, H. W.
Lambdin, A. B.
Lemen, T. T.
Pool, C. F.
Reppert, F. G.
Riley, F. H.
Sanger, S. H.
Satterfield, R. L.
Scott, G. V.
Shores, H. G.
Smith, F. N.
Snider, C. R.
Swearingen, E. L.
Tabler, A. R.
Watkins, M. M.
Williams, J. A.
Young, L. C.

COMPANY "B"

Hugh C. Barnes, Captain
Davis H. Estill, First Lieutenant
Claude S. Tetrick, First Lieutenant
Charles G. Baker, First Sergeant

Sergeants

1. H. S. Sydenstricker
2. H. H. Kerr
3. N. M. Heflin,
4. J. C. Jones

Corporals

1. J. J. Jenkins,
2. J. McCoy
3. J. L. Robinson

J. V. Blair, Musician

Privates

Ash, Ray
Bromley, E. D.
Butcher, J. G. W.
Butcher, H. G. W.
Coombs, F.
Cooper, F. F.
Crawford, T. W.
Fortney, H. G.
Freeman, W. B.
Groves, A. R.
Heltzen, J. G.
Hoskins, S. P.
Kirk, J. De A.
Kurner, D. C.
Lewellen, L. S.
McDonald, B.
Milam, W. H.
Pearson, F. R.
Piles, W. B.
Pugh, C. C.
Pease, M. J.
Rice, G. J.
Radabaugh, D. A.
Riggs, H. C.
Sander, F. W.
Sheets, E. W.
Shriver, H. L.
Starbuck, W. H.
Taylor, M. L.
Tompkins, H. P.
Wade, H. A.
Williams, Phil.
Zinn, W. F.

DEGREES, DIPLOMAS AND PRIZES

Forty-first Annual Commencement, June 17, 1908

CANDIDATES FOR DEGREES

Master of Arts

Clara Fleming Sheldon A.B., University of Nebraska, 1908	Morgantown

Master of Laws

Albert Jackson Collett LL.B., West Virginia University, 1906	Beverly
Dennis Martin Willis LL.B., West Virginia University, 1899; A.B., *ibid.*, 1905	Morgantown

Bachelor of Arts

George Karl Allman	Lorentz
Maud Fulcher Callahan	Morgantown
Mary Hannah Cooper	Crossville, Tenn.
Guy Morgan Cornett A.B., Peabody College, 1903	Fries, Virginia
George Billmyer Folk	Martinsburg
Margaret Virginia Foulk	Huntington
Ethel Averill Green	Morgantown
James Henry Jackson	Jane Lew
Ethel Belle Jones	Knottsville
William Michael Kennedy	Fairmont
John William Mason, Jr.	Fairmont
Emma Laura Parks	Fairmont
Rebecca Luella Pollock	Waynesburg, Pa.
Clara May Reinheimer	Fairmont
Cilda Langfitt Smith	Fairmont
Lee Allen Smith	Smithfield, Pa.
Forrest Wilbur Stemple	Aurora
Margaret Lynne Waddell	Brandonville

MABEL JANE WEAVER	Morgantown
GEORGE WESLEY WHITING	Martinsburg

Bachelor of Science

CHARLES ALBERT BOWERS	Wheeling
WINTER REGINALD FRANTZ	Cumberland, Md.
WALTER GAY LOUGH	Fairmont
FELIX YANOWSKI	Longacre

Bachelor of Laws

GOHEN CLARKE ARNOLD	Buckhannon
ARTHUR SPENCER DAYTON A.B., West Virginia University, 1907	Philippi
GEORGE ALOYSIUS FEENY A.B., Old Point Comfort College, 1904	Wheeling
THOMAS JOSEPH GILLOOLY A.B., Mt. St. Marys College, 1906	Roanoke
STEPHEN GOODLOE JACKSON B.S., West Virginia University, 1907	Jane Lew
WILLIAM MELVIN MEREDITH	Huntington
ARLEN GOFF SWIGER	Clarksburg
JOHN FRANKLIN THROCKMORTON A.B., West Virginia Wesleyan College, 1906	Hundred

Bachelor of Science in Civil Engineering

ERNEST ARDEN BRUCE	Bluefield
THOMAS BOND FOULK	Huntington
BARBEE MARCELLUS GREEN	Lewisburg
JAMES HALL JENKINS	Petroleum
JOHN DANA MCNUTT B.S., Valparaiso University, 1902	Sutton
GEORGE W. POW B.L., Berea College, 1905	Adams, Mass.

Bachelor of Science in Mechanical Engineering

JAMES SAMUEL BROYLES	Wikel
GLENN ALBERT COLLIER	Ceredo
HARBOUR MITCHELL	Wheeling
LAWRENCE DAVIS SAUNDERS	Van Voorhis
LLOYD BLAINE SELBY	Morgantown
JACOB ALFRED YONKER	Mason

Doctor of Medicine

SAMUEL CECIL AUSTIN	Lewisburg
ALLEN EUGENE BURNER	Cass
CLYDE WILLIAM CONN	Smithfield, Pa.
WILLIAM LEE COOGLE	Rivesville
ROBERT WIRT DUNHAM	Belington
GEORGE DELBERT JOHNSON	Whites Creek
JOHN HARNESS STEENBERGEN	Beale

CANDIDATES FOR DIPLOMAS AND CERTIFICATES

Diploma of Graduation in Law

FRANK ROY ANDERSON	Wellsburg
WILLIAM DELANCY BRIGHTWELL	Morgantown
JOHN WILLIAM CUMMINGS LL.B., Georgetown University, 1907	Wheeling
HARRY RUTHERFORD DOWNS	Uniontown, Pa.
IRWIN STRAUSS GOLDBARTH	Charleston
DOUGLAS HENRY HARNISH	Parkersburg
LOWRY BURCHINAL HUEY	Mannington
HOWARD JOSHUA JAMES	Adamston
CHARLES LEWIS LEWELLYN	Pittsburg, Pa.
JAMES WILLIAM MAXWELL	Beckley
BENJAMIN FRANKLIN MCGINNIS	Ellenboro
MONT MCINTIRE	New Martinsville
HARRY GUS SHAFFER	Kingwood
ELLIS ASHBY YOST	Morgantown

PRIZES AND HONORS

The Inter-Society Prizes

For the Parthenon Society:

Essay

MARGARET LYNNE WADDELL, Senior.....Brandonville

Oration

WILSON HENRY STOUT WHITE, Sophomore.....Canton

Debate

JAMES HENRY CALLISON, Senior.....Morgantown

HARRIS AQUILLA REYNOLDS, Special C.E.....Morgantown

For the Columbian Society:

Declamation

ELIZA PEARL HODGES, Music.....Morgantown

The Bryan Prize

JOSEPH COCHRAN VANCE, Sophomore.....Morgantown

The Tax Commission Prize

WILLIAM MICHAEL KENNEDY, Senior.....Fairmont

The James F. Thompson Prize

SILAS CLEVELAND UNDERWOOD, Freshman Medical.....Wellsburg

The Russell Love Morris Prize

JOHN DANA MCNUTT, Senior C.E.....Sutton

The Inter-Collegiate Debates

Subject:—Resolved, That the United States should exclude Japanese laborers on the same terms as the Chinese are excluded.

Affirmative team, victorious over Wooster University:

PAUL REED MORROW, Sophomore.....Huntington
ELLIS ASHBY YOST, Senior, Diploma Law.....Morgantown
JOHN CRISTLER EVANS, Sophomore.....New Cumberland

Negative team, victorious over Western University of Pennsylvania:

JAMES DEFORIS PARRIOTT, Bar Law.....Cameron
HARRIS AQUILLA REYNOLDS, Special C.E.....Morgantown
HORACE LABAN WHITE, Sophomore.....Canton

COMMENCEMENT AND CONVOCATION SPEAKERS

Commencement, June 17, 1908, Baccalaureate Sermon, Bishop J. W. HAMILTON, LL.D., of Washington, D. C.; Commencement Address, Hon. ELMER ELLSWORTH BROWN, PH.D., of Washington, D. C.

Summer School Convocation, EDWARD HOWARD GRIGGS, A.M., of Montclair, New Jersey.

Fall Quarter Convocation, Rabbi J. LEONARD LEVY, D.D., of Pittsburg, Pennsylvania.

Winter Quarter Convocation, HENRY S. PRITCHETT, PH.D., of New York City, New York.

Spring Quarter Convocation, HAMILTON HOLT, Editor of "The Independent," New York City, New York.

ALUMNI ASSOCIATIONS

GENERAL ASSOCIATION

President	THOMAS PERRY JACOBS, '74	New Martinsville, W. Va.
Vice-President	THOMAS E. HODGES, '82	Morgantown, W. Va.
Secretary-Treasurer	D. M. WILLIS, '99	Morgantown, W. Va.

Executive Committee

FRANK COX, Morgantown
ROBERT A. ARMSTRONG, Morgantown
WALTER H. SOUTH, Morgantown
D. M. WILLIS, Morgantown
CLEMENT R. JONES,
MABEL R. GLASSCOCK, Morgantown
WM. C. MEYER, Morgantown
MARGARET BUCHANAN, Morgantown
ELEANOR MORELAND, Morgantown
WAITMAN BARBE, Morgantown
THOMAS E. HODGES, Morgantown
E. G. DONLEY, Morgantown
MADISON STATHERS, Morgantown
A. J. HARE, Morgantown
GILBERT B. MILLER, Morgantown
RUSSEL L. MORRIS, Morgantown
RAYMOND MAXWELL, Clarksburg
SAMUEL S. JACOB, Wheeling
EARL A. BROOKS, Weston
CHAS. M. MCWHORTER, Charleston
HUNTER H. MOSS, Parkersburg
WADE C. KILMER, Martinsburg
IRA BENTON BUSH, Hinton
VIRGINIA FOULK, Morgantown
JOHN G. KNUTTI, Shepherdstown
J. C. MCWHORTER, Buckhannon

EASTERN PANHANDLE ALUMNI ASSOCIATION

President	H. H. EMMERT, '88	Martinsburg, W. Va.
Secretary	C. E. MARTIN, '99	Martinsburg, W. Va.

WEST VIRGINIA UNIVERSITY CLUB OF WESTERN PENNSYLVANIA

President	J. D. SWEENY	Pittsburg, Penna.
Vice-President	G. H. HOLY	Pittsburg, Penna.
Seretary	D. E. PARSONS	Pittsburg, Penna.

Executive Committee

J. B. SWEENY G. H. HOLY D. E. PARSONS
F. G. ROSS L. K. ST. CLAIR

Annual reunion, third Friday in January.

LIST OF STUDENTS

NOTE:—The following list includes the names of all students enrolled in the various colleges of the University, arranged in alphabetical order. A supplementary list includes the names of those students in the four-year course in medicine who are now completing their course in the College of Physicians and Surgeons at Baltimore, Maryland. Following each student's name and address are given his class, the course of study which he is pursuing, or the degree for which he is a candidate. The word freshman, sophomore, etc., following the student's name indicates his rank on the first day of January, 1909. Students whose names are marked with an asterisk (*) are ranked as freshmen, but are conditioned in one or more preparatory subjects. Students marked as special students are classified in accordance with the regulations found on page 35 of the catalogue.

Adkins, Asa Williams	Huntington	Fr., M.D.
Alexander, Julia M.	Oswego, New York	Special
Allen, Edward Alburtis	Shinnston	Special
Allen, Boyd M.	Hepzibah	S. C. Agr.
Allender, James Guy	Grafton	Jun., LL.B.
Allison, George William	West Finley, Pa.	Bar Law
Allman, George Karl	Lorentz	Sen., B.S.C.E.
Allman, Emery V.	Jane Lew	S. C. Agr.
Allman, Evert Earl	Jane Lew	Vet. Sc.
Amos, Clay Dillie	Fairmont	Soph. A.B.
Andris, Irene Marie	Morgantown	Fr., A.B.
Appleby, James	Morgantown	Vet. Sc.
Arnett, Mary Belle	Rivesville	S. C. Agr.
*Arnold, Edna	Weston	Fr., A.B.
Arnold, Charles	Lost Creek	Vet. Sc.
Atkeson, Leda Cordelia	Morgantown	Soph. A.B.
Atkeson, Mary Meek	Buffalo	Jun., A.B.
Backman, Lloyd Sutton	Morgantown	Sen., B.S.C.E.
Baker, Charles George	Morgantown	Soph., A.B.
Baker, Henry	Morgantown	S. C. Agr.
Baker, Edgar Daniel	Morgantown	Jun., LL.B.
Ball, William Thomas	Hinton	Bar Law
Ball, Barnetta	Elizabeth	Fr., A.B.
Barnes, Hugh Cooper	Fairmont	Sen., B.S.M.E.

Barron, Howard Curtis	Shamokin, Pa.	Dip. Law
Bartlett, Evan Allen	Hepzibah	Bar Law
Bartlett, Howard Robert	Fairmont	Soph., LL.B.
Baumgartner, William Michael	Morgantown	Grad., A.M.
A.B., West Virginia University, 1903		
Beall, Emma	Wheeling	Soph., A.B.
Beckett, Ray Peck	Pickaway	Fr., B.S.C.E.
Behrens, Edward Charles William	Sherrard	S. C. Agr.
Behrens, William August Henry	Sherrard	S. C. Agr.
Bell, Alexander Deacon	Morgantown	Jun., B.S.M.E.
Bell, Ernest Roy	Fairmont	Fr., B.S.M.E.
Bell, Ernest	Wana	Vet. Sc.
Bennett, Clyde Mortimer	Morgantown	Sen., C.E.
*Bernstein, Leonard Julius	Sutton	Fr., B.S.M.D.
Berry, French Ensor	Rivesville	S. C. Agr.
*Best, Franck Phillips	Morgantown	Fr., B.S.E.M.
Biddle, Milton Scott	Morgantown	Bar Law
Biern, Sam	Huntington	Jun., Dip. Law
Billingsley, Jay Edgar	Morgantown	Jun., B.S.C.E.
Blagg, Donald Orr	Point Pleasant	Bar Law
*Blair, Jackson VanBuren, Jr.	West Union	Fr., LL.B.
*Blake, Robert Sanford	Moundsville	Fr., A.B.
Boggess, Clinton Tippy	Salem	Grad., A.M.
A.B., West Virginia University, 1907		
Bolles, Willis William	St. Marys	Bar Law
Bond, Sirus Orestes	Lost Creek	Sen., A.B.
Bond, Marcus Orran	Wheeling	Soph., B.S.
Border, Ralf Winebrener	Kearneysville	Sen., Dip. Law
Boughner, Jennie	Morgantown	Fr., A.B.
Boughner, Lillian May	Morgantown	Fr., A.B.
Boutwell, Louis Eugene	Lambertville, N. J.	Soph., A.B.
Bowlby, Arthur Willey	Bowlby	S. C. Agr.
Bradley, Walter Bruce	Perryopolis, Pa.	Fr., B.S.M.E.
Brand, Willa Norvella	Morgantown	Special
Brindley, Arthur Aquilla	Swanton, Ohio	Fr., B.S.M.D.
*Brinkman, Frederick Henry	Wheeling	Jun., Dip. Law
Britton, Luther Sherman	Morgantown	Jun., A.B.
*Bromley, Edgar Duvall	Ridgeway	Fr., B.S.C.E.
*Brooke, Anne Washington	Morgantown	Fr., A.B.
Brooks, Alonzo Beecher	French Creek	Fr., B.S.Agr.
Buchanan, Robert Lester	West Alexander, Pa.	Jun., B.S.
Bufano, Garibaldi	Morgantown	Jun., Dip. Law
Bullard, Archie Huff	Wheeling	Jun., B.S.
Burrell, Howard Kenwell	Weston	Jun., B.S.C.E.

Burns, LeVega Washington	Marlinton	Sen., A.B.
Burnside, Morris Claybourne	Point Pleasant	Soph., B.S.M.E.
Burnside, Guy Herman	Clarksburg	Soph., A.B.
Burritt, Clark Culbertson	Morgantown	Soph., B.S.M.E.
Cady, Agnes	Morgantown	Soph., A.B.
Callahan, Maud Fulcher	Morgantown	Grad., A.M.
A.B., West Virginia University, 1908		
Callison, James Henry	Morgantown	Sen., A.B.
Camp, David Jesse Holland	Morgantown	Diploma Agr.
Campbell, Harry Lucas	Morgantown	Soph., B.S.C.E.
Carbonell, Arturo	Mayaguez, Porto Rico	Special
Carlin, Leo	Smithfield	Sen., A.B.
Cather, Wilber Earl	Fairmont	Jun., A.B.
Chaney, Myrtle	Washington, Pa.	Fr., A.B.
Charter, Lena Mabel	Ravenswood	Soph., A.B.
Christman, Orilla Streator	Morgantown	Special
Clayton, Bruce Tilden	Newark	Bar Law
*Clarke, George Rodgers	Burning Springs	Fr., B.S.C.E.
Clifford, Lucy Clare	Clarksburg	Soph., A.B.
Coffman, Carroll Clair	Mannington	S. C. Agr.
Cole, Jeremiah Wilson	Cameron	Soph., A.B.
Cole, Robert Lee	Wheeling	Grad., A.M.
A.B., West Virginia University, 1906		
Colebank, George Henry	Grafton	Jun., A.B.
Collett, Albert Jackson	Beverly	Sen., A.B.
Conaway, Ernest Daniel	Fairmont	Fr., B.S.C.E.
Conley, Rollo Joseph	Fairmont	Bar Law
Conrad, Bernard Roy	Sand Fork	Fr., B.S.C.E.
Cooper, Everett Roy	Auburn	Fr., M.D.
*Cooper, Francis Frederick	Morgantown	Fr., B.S.M.E.
Core, Moses Levin	Mount Morris, Pa.	S. C. Agr.
Core, Minnie Leigh	Morgantown	Special
Core, John Lee	Morgantown	Special
Core, Lewis Smith	Morgantown	Jun., A.B.
Cornett, Guy Morgan	Bluefield	Grad., A.M.
Courtney, Crystal	Morgantown	Sen., A.B.
Cox, Nell Hazel	Fairmont	Soph., A.B.
*Cox, Anna Grace	Millwood, Virginia	Fr., A.B.
Cox, Stanley Rhey	Morgantown	Soph., A.B.
Craddock, Bantz Wooddell	Glenville	Jun., Dip. Law
*Crawford, Thomas Wilmer	New Cumberland	Fr., B.S.C.E.
Crickard, Cecil Lewellyn	Huttonsville	Sen., Dip. Law
Crogan, Hubert Garret	Newburg	Jun., Dip. Law
*Cronin, David Arthur	Portland, Conn.	Jun., Dip. Law

Crewson, George Grant	New Cumberland	Jun., B.S.M.E.
Crow, Charles Sumner	Mannington	Grad., A.M.
A.B., West Virginia University, 1906		
Crowl, Walter Beryl	Fairmont	Soph., B.S.M.E.
Cuevas, Rafael Maria	Luquillo, Porto Rico	Sen., Dip. Law
Cummins, Carroll Elbridge	Washington	Sen., A.B.
Cummins, George Harold	Wheeling	Soph., B.S.M.E.
Cunningham, C. E.	Rivesville	S. C. Agr.
Curry, Marion Talbott	Delphi	Bar Law
Cutright, Frank	Sago	Grad., A.M.
A.B., West Virginia University. 1906		
Dague, Carrie Maude	Viola	Sen., A.B.
*Darling, Anna Belle	Morgantown	Fr., A.B.
Darnall, Hazel Barnett	French Creek	S. C. Agr.
*Davis, Gail	Van Voorhis	Fr., A.B.
†Davis, Bruce	Van Voorhis	Grad., A.M.
A.B., West Virginia University, 1906		
Davis, Simon Preston	Johnstown, Pa.	S. C. Agr.
*DeBerry, Helen Margaret	Terra Alta	Fr., A.B.
Dickason, Clara Elizabeth	Columbus, Ohio	Soph., A.B.
Diffendal, Charles Edward	Williamson	Jun., B.S.M.E.
Dille, James Evans	Morgantown	Soph., B.S.Agr.
Dille, Elisha Meriel	Morgantown	S. C. Agr.
Dilworth, John Byron	Flemington	Bar Law
Donley, William Guy	Shepherdstown	Soph., B.S.M.E.
Donnally, Moses Starke	Charleston	Soph. B.S.M.E.
Dunn, Frank Lewis	Martinsburg	Bar Law
Dunkle, John Lee	Deer Run	Fr., B.S.M.E.
Dyer, Roscoe	Philippi	S. C. Agr.
Eagan, Fannie	Ronceverte	Special
Eaton, Harry Anthony	Morgantown	Soph., B.S.C.E.
A.B., West Virginia University, 1897		
Eckman, James Roy	Leechburg, Pa.	Jun., A.B.
Eddy, Henry D.	Morgantown	Bar Law
Elliott, Anna Naomi	Sistersville	Soph., B.S.
Ely, John Calvin, Jr.	Morgantown	Junior, A.B.
Elson, Otto Dale	Wellsburg	Fr., B.S.C.E.
Estill, Davis Hudson	Charleston	Jun., B.S.C.E.
Evans, Eugene Everly	Morgantown	Fr., A.B.
Evans, Oscar Clay	Paden City	Bar Law
Evans, John Chrisler	New Cumberland	Jun., A.B.
Everhart, Lee Frank	Buckhannon	Jun., Dip. Law

†Deceased

Faust, Wirt Gerry	Fairmont	Fr., A.B.
Felgar, Robert Pattison	Scottdale, Pa.	Fr., LL.B.
Felker, Guy Gilmore	Martinsburg	Jun., Dip. Law
Feller, Charles Victor	Martinsburg	Sen., B.S.M.E.
*Ferguson, Ethel Emma	Shinnston	Fr., A.B.
Ferrell, James Wilson	Belington	Sen., B.S.
Finlayson, John Kennedy	Sistersville	Sen., A.B.
Fisher, Milton Dewitt	Morgantown	Fr., B.S.C.E.
Fitzgerald, Boyce Ray	Oak Hill	Soph., LL.B.
Fitzgerald, Thomas Witt	Huntington	Sen., B.S.M.E.
Fitzwater, John Roger	Gad	Fr., B.S.Agr.
Fleshman, Howard Franklin	Ronceverte	Fr., A.B.
Fling, Eva Myrtelle	Alfred	Soph., A.B.
Floerckey, Herbert Edward	Morgantown	Soph., B.S.C.E.
Folau, Rosa	Clarksburg	Sen., B.S.
Foreman, Nyna	Morgantown	Jun., B.S.
Forman, Lawrence Payne	Morgantown	Fr., B.S.
Forster, Frederic Albert	Moundsville	Grad., A.M.
A.B., West Virginia Wesleyan College		
Fravel, Mary Stewart	Poca	Jun., A.B.
Fries, Lorena Mabel Lee	Berkeley Springs	Sen., A.B.
French, Robert Moss	Beckley	Fr., LL.B.
Freeman, Charles Wilkerson	Huntington	Sen., Dip. Law
Friedman, Sydney Loth	Point Pleasant	Jun., Dip. Law
*Gain, Charles Grantham	Glengary	Jun., Dip. Law
*Gallaher, Edith Genevieve	St. Marys	Freshman
Garvin, John Buchanan	Charleston	S. C. Agr.
Gautier, Claude Vernon	Huntington	Soph., M.D.
Gawthrop, Robert Murray	Bridgeport	Soph., B.S.C.E.
Gibbs, Oscar Franklin	Point Pleasant	Sen., B.S.M.E.
Gibson, John Shackleford, Jr.	Huntington	Fr., M.D.
Gieseler, John Henry	Sherrard	S. C. Agr.
Gilchrist, Marion Champe	Charleston	Jun., LL.B.
Gilson, Van Wagener	Mannington	Fr., A.B.
*Gotshall, James Henry	Huntington	Fr., B.S.M.E.
Gorby, Thomas David	Morgantown	Special, C.E.
Gorley, John Henry	New Martinsville	Fr., A.B.
Gould, Richard Jay	Parkersburg	Jun., B.S.E.M.
Grayson, John Lee	Sharpsburg, Md.	Jun., B.S.M.E.
Green, Ethel Averil	Morgantown	Grad., A.M.
A.B., West Virginia University, 1908		
Gress, Harry Elmer	Jumonville, Pa.	Fr., A.B.
Griffin, Harry Lewis	Morgantown	Jun., A.B.
Grigg, Adam Hanford	Pratt	Soph., M.D.

Grimm, Bruce Funtil	St. Marys	Soph., B.S.M.E.
*Grogg, Robert Clifton	Parkersburg	Fr., A.B.
Grose, Sylvester Carson	Sago	Soph., A.B.
Grose, Edward Rutherford	Sago	Sen., A.B.
Groves, Homer David	Earl	Fr., B.S.Agr.
Grow, George Walter	Williamstown	Soph., B.S.M.E.
*Grubb, Joseph Krause	Parsons	Fr., B.S.C.E.
Grumbein, John Behny	Morgantown	Sen., B.S.M.E.
Gunnoe, George Hutchinson	Crany	Soph., LL.B.
Habermehl, John Henry	Woodland	Jun., Dip. Law
Hall, John Wotring	Keyser	Sen., B.S.C.E.
Hall, Frank	Marion	Fr., A.B.
Hall, Roy Olney	Morgantown	Sen., LL.B.
Hamilton, William Gail	Wellsburg	Sen., Dip. Law
Harless, Floyd Hinson	Dial	Bar Law
Harner, Luther Vincent	Morgantown	S. C. Agr.
Haner, Philip Edbert	Morgantown	S. C. Agr.
Harper, Edward D.	Elkins	S. C. Agr.
Harris, Thomas Lewis	Hedgesville	Soph., M.D.
Harris, George Hunter	Hedgesville	Bar Law
Harris, Charles Hennon	Martinsburg	Fr., A.B.
Hartley, Guy Baxter	Morgantown	Special, C.E.
Harvey, Stanley Wilson	Wilson	S. C. Agr.
Haught, Benjamin Franklin	Atwood	Sen., A.B.
Haworth, James Rodgers	Huntington	Soph., A.B.
Hawley, John Layne	Bluefield	Sen., Dip. Law
Hayes, Flora Ray	Morgantown	Sen., A.B.
Headley, Julius Byron	Brock, Pa.	Sen., B.S.C.E.
Hefke, Julius Henry	Dayton, Ohio	Soph., B.S.C.E.
Henderson, Shelton Eldredge	Birch River	Special
*Henderson, Ira Coleman	Mount Morris, Pa.	Jun., Dip. Law
Henderson, Justin	Buckhannon	Jun., Dip. Law
Henderson, Nellie Grant	West Alexander, Pa.	Jun., A.B.
Hickman, James Howard	Auburn	Fr., A.B.
Hinerman, Edward Maywood	Moundsville	Sen., Dip. Law
Hodges, Mabel Clare	Morgantown	Fr., B.S.
Hodges, Olive Ireland	Morgantown	Jun., A.B.
Hodges, Warren Hampton	Morgantown	Sen., A.B.
Hoffman, Alexander Campbell	Morgantown	Fr., B.S.C.E.
Hoffman, William Kemp	Morgantown	S. C. Agr.
Hoffman, Louise Blackstone	Morgantown	S. C. Agr.
Hoffman, Daniel Clark	Morgantown	S. C. Agr.
Hoffman, Thomas Stewart	Morgantown	Bar Law
Hogsett, Everett Leon	Fair Plain	Bar Law

Holloway, LeRoy Park	Columbiana, Ohio	Sen., B.S.M.E.
Holt, Howard Harwood	Grafton	Sen., Dip. Law
*Hopwood, Margaret Bradfield	Morgantown	Fr., A.B.
Horstmann, Edward Fred	Wheeling	Sen., Dip. Law
Hoskins, Homer Arthur	Weston	Jun., B.S.M.E.
Hoskinson, John Crago	Waynesburg, Pa.	Soph., B.S.M.E.
*Houston, June Carey	Morgantown	Fr., B.S.
Hundley, James Howard	Smoot	Bar Law
Hundley, John Palmer	Masontown	Bar Law
*Hunt, William French	Morgantown	Fr., A.B.
Hunter, Glenn	Morgantown	Fr., LL.B.
Hutchinson, Bernard Lee	Fairmont	Fr., B.S.
Hutchinson, Brooks Swearengen	Fairmont	Sen., A.B.
Huyett, John Burns	Charles Town	S. C. Agr.
Ice, Lory Francis	Smithfield	Fr., A.B.
Ice, Ethel	Farmington	Jun., A.B.
Ice, William David	Fairmont	S. C. Agr.
Inskeep, Henry Carter	Romney	S. C. Agr.
Irons, Abbie Suiter	Elkins	Special
Jackson, Frances Florence	New Haven	Sen., A.B.
Jackson, Cora Edna	Ronceverte	Special
Jacobs, Arthur Melville	Fairmont	Jun., A.B.
Jamison, George Washington	Morgantown	S. C. Agr.
Jamison, Jarrett, Jr.	Morgantown	S. C. Agr.
Jarvis, Benjamin Bassel	Clarksburg	Sen., Dip. Law
Johnson, Laura Dale	Morgantown	Special
Johnson, Charity Nelson	Bridgeport	Special
Jones, Ethel Belle	Knottsville	Grad., A.M.
A.B., West Virginia University, 1908		
*Jones, James Clyde	Smithton	Jun., Dip. Law
Jones, Harry Lee	Huntington	Sen., Dip. Law
Jordan, Willie Brightwell	Hinton	Fr., LL.B.
Judge, Robert Simms	Wellsburg	Jun., Dip. Law
Jull, Morley Allan	Burford, Ontario	Fr., B.S.Agr.
Kahn, David Harman	Parkersburg	Jun., B.S.E.M.
*Kear, Harry Alexander	Van Wert, Ohio	Fr., B.S.M.E.
Kee, Jasper Newton	Glenville	Jun., Dip. Law
Kenajian, Hagop Garabed	Philadelphia, Pa.	Special
Kennedy, Edward	Boothsville	Fr., A.B.
Kennedy, John James	Fairmont	Fr., A.B.
Kennedy, William Michael	Fairmont	Sen., LL.B.
*Kerr, Harman Haller	Davis	Fr., A.B.
Kiger, Burch Cracraft	Sherrard	Vet. Sc.
*Kiger, Pearl Randolph	Sherrard	Fr., B.S.M.E.

*King, Harry William, Jr.	Wheeling	Jun., Dip. Law
King, Benjamin Walter	McMechen	Sen., A.B.
*Kirk, Jose de Almeide	Valenca, Brazil, S. A.	Fr., B.S.M.E.
Kisar, Adam Frederick	Point Pleasant	Jun., Dip. Law
*Knowlton, Helen Riggan	Morgantown	Fr., A.B.
Koelz, Frederick Rost	Keyser	Jun., A.B.
Koelz, Herman Charles	Keyser	Sen., B.S.C.E.
Kraemer, Elsie Marie	Brooklyn, N. Y.	Soph., A.B.
Kump, Garnett Kerr	Concord	Bar Law
Kunkle, Josephine Margaret	Morgantown	Special
Kurner, David Conrad, Jr.	Wheeling	Bar Law
Laidley, William Sydney, Jr.	Charleston	Bar Law
Lakin, Finney Lee	Terra Alta	Jun., LL.B.
Lamar, Charles Roscoe	Martinsburg	Bar Law
Lamb, Ida May	Troy	Special
*Lambdin, Allen Bennett	Keyser	Fr., B.S.M.E.
Law, Jenning Virgil	Newberne	Vet. Sc.
*Lantz, Pierce Byron	Blacksville	Fr., LL.B.
Lashley, Karl Spencer	Davis	Jun., B.S.
Lee, Curtis Fitzhugh	Evelyn	Bar Law
Lemen, Thomas Thornburg, Jr.	Martinsburg	Bar Law
Lemley, Grover Cleveland	Morgantown	Jun., B.S.C.E.
Lilly, John Sherman	Flat Top	Bar Law
Littlepage, Burrell Kemp	Charleston	Jun., Dip. Law
Lively, Charles	Weston	Bar Law
Livezey, Fred Myron	Ashton	Bar Law
Lloyd, Mylie Everette	New Cumberland	Jun., B.S.M.E.
Love, Samuel Edwin	Montgomery	Bar Law
Louchery, Charles William	Clarksburg	Jun., A.B.
Lough, Charles Melvin	Cameron	Soph., B.S.
Lough, William Cleveland	Cameron	Fr., B.S.
Lucas, Arthur Mapel	Morgantown	Sen., B.S.C.E.
Luttrell, Ernest Love	Martinsburg	Jun., Dip. Law
Lytle, Clara Belle	Parkersburg	Jun., A.B.
MacEnany, FitzRandolph	Clear Spring, Md.	Fr., B.S.C.E.
Marsh, Joseph Franklin	Harrisville	Grad., A.M.
A.B., West Virginia University, 1907		
Marsh, Nancy Ernzy	Joseph's Mills	Fr., A.B.
*Marstiller, Ottis Grover	Elkins	Fr., B.S.C.E.
Martin, Cullen Guile	Clarksburg	Fr., B.S.M.E.
Martin, Ella V.	Morgantown	Special
Mason, John William, Jr.	Fairmont	Sen., LL.B.
Mann, Thomas Freeland	Fort Spring	S. C. Agr.
Maxwell, Earl Linsey	Elkins	Sen., Dip. Law

May, Hubert David	Charleston	Sen., Dip. Law
Mayer, Fred Blight	Towanda, Pa.	Vet. Sc.
McCamic, Harry Everett	Wellsburg	Diploma Law
McCarthy, Timothy James	Morgantown	Sen., B.S.
McClure, Fred K.	Dunkard, Pa.	Vet. Sc.
*McCombs, Edgar Pearl	Sherrard	Fr., B.S.C.E.
McConkey, Orie	Clarksburg	Grad., A.M.
A.B., West Virginia University, 1903		
McConnell, Albert Russell	Sherrard	S. C. Agr.
McCoy, Jackson	Washington, D. C.	Fr., A.B.
McCray, French	Fairmont	Sen., LL.B.
McCreery, William VanKirk	Morgantown	Jun., Dip. Law
*McCullough, Frank Witcher	Huntington	Jun., Dip. Law
McDonald, Logan	Sycamore	Fr., B.S.C.E.
McGinnis, Howard Justus	Morgantown	Special
McJilton, John Perkins	Sleepy Creek	Sen., B.S.M.E.
McMinn, Thomas Roach	Jefferson, Pa.	Soph., A.B.
McNell, Allyn Cecil	Wheeling	Bar Law
McNutt, Raymond Campbell	Sinks Grove	S. C. Agr.
McQuilkin, Dwight Eggleston	Shepherdstown	Graduate
A.B., West Virginia University, 1905; A.M., 1906		
McVey, Earle Gancey	Victor	Fr., B.S.C.E.
*Means, Guy Goffe	Grafton	Fr., LL.B.
Meathrell, Rupert	Berea	S. C. Agr.
Meredith, Aubrey William	Fairmont	Bar Law
Merrill, Austin Cook	Morgantown	Bar Law
Mockler, Margaret Eleanor	Mannington	Jun., A.B.
Mollison, John Lowsetter	Scottdale, Pa.	Jun., LL.B.
Montgomery, Flora Edith	Wheeling	Soph., A.B.
Moon, Ada	Morgantown	Sen., A.B.
Moon, Charles	Morgantown	Jun., B.S.C.E.
Moore, Susan Maxwell	Morgantown	Sen., A.B.
Moran, Irving Hayne	Morgantown	Jun., B.S.M.E.
Morgan, Purley	Alexander	Soph., A.B.
Morgan, John Thoburn	Charleston	Jun., B.S.M.E.
Morgan, Rembrandt	Winfield	Vet. Sc.
Morgan, William Derry	Lost Creek	S. C. Agr.
Morris, Winfield Scott	Spencer	Grad., A.M.
A.B., Marietta College, 1898		
Morris, Nellie Della	Morgantown	Grad., A.M.
A.B., West Virginia University, 1907		
Morris, James Richard Walter, Jr.	Moundsville	Sen., Dip. Law
*Morris, James Thomas	Cassville	Fr., B.S.C.E.
Morris, LeRoy Holmer	Connellsville, Pa.	Jun., B.S.M.E.

Morris, Ottie LeRoy	Uniontown, Pa.	Soph., M.D.
*Morris, Samuel John	Morgantown	Fr., M.D.
Morrow, Paul Reed	Huntington	Sen., A.B.
Muldoon, Ralph Wickliffe	Morgantown	Diploma Agr.
Murphy, Riley Bowman	Newville	Bar Law
Murphy, James Scott	Morgantown	Grad., M.E.
B.S.M.E., West Virginia University, 1905		
Murray, Dwight Luther	McMechen	Soph., A.B.
Myers, Clifford Renwar	Mason	Grad., A.M.
A.B.,West Virginia University, 1907		
Neal, Ada May	Parkersburg	Sen., A.B.
Neal, Virginia Bransford	Parkersburg	Sen., A.B.
Nebinger, Richard Wright	Morgantown	Sen., Dip. Law
Neel, Isa Maud	Ellenboro	Grad., A.M.
A.B., West Virginia University, 1904		
Neil, Charles Edmund	Morgantown	Graduate
A.B., Ohio Wesleyan University, 1897		
Nepps, Carl	McWharter	S. C. Agr.
Newman, Dora Lee	Glendale	Special
Nolan, Aretas Wilbur	Morgantown	Grad., A.M.
A.B., Indiana University, 1905		
Nutter, Trevey	Fairmont	Sen., Dip. Law
Nuzum, John	Grafton	Grad., A.M.
A.B., West Virginia University, 1894		
Oldham, Edward Curtis	Moundsville	Jun., B.S.M.E.
O'Neal, Lacy Burke	Fayetteville	Sen., Dip. Law
Osborn, George Morris	Clarksburg	Fr., A.B.
Osterberg, Axel Vernon	Eskilstuno, Sweden	Fr., B.S.M.E.
Otto, Julia Elizabeth	Triadelphia	Fr., A.B.
Parker, J. W.	Mona	S. C. Agr.
Parriott, James Deforis	Cameron	Sen., Dip. Law
Parrish, Roy Earl	Clarksburg	Jun., Dip. Law
Patterson, Marjorie Bonner	Morgantown	Soph., A.B.
Patterson, Thomas Shaffer	Morgantown	Jun., B.S.M.E.
Pearcy, Earl	Morgantown	Vet. Sc.
Pease, Anna Isabel	Oswego, N. Y.	Special
Peck, Charlie H.	Clarksburg	S. C. Agr.
Peddicord, Charles Edward	Morgantown	Sen., Dip. Law
Peterson, Ethel Crim	Weston	Jun., A.B.
Peterson, Verd	Weston	Jun., A.B.
Phillips, Levi Leander	Wolf Run	S. C. Agr.
Pickenpaugh, Beulah Frank	Morgantown	Fr., A.B.
Pierce, Andrew Craig	Morgantown	Fr., B.S.C.E.

*Piles, William Burns	Ceredo	Fr., M.D.
Pitzer, Thomas Clyde	Mannington	Soph., B.S.M.E.
Pixler, John Milton	Morgantown	S. C. Agr.
Pixler, Ernest Claud	Morgantown	Fr., B.S.C.E.
Pocock, Herman Deidler	Morgantown	Soph., B.S.
Point, Walter Warren, Jr.	Huntington	Jun., B.S.M.D.
Pomroy, Thompson	Elizabeth	S. C. Agr.
Post, Porter Wallace	Jane Lew	Sen., B.Agr.
Powell, Frank Martin	Clarksburg	Sen., Dip. Law
Pollock, Rebecca Luella	Waynesburg, Pa.	Grad., A.M.
A.B., West Virginia University, 1908		
*Pool, Clark Francis	Chester	Fr., M.D.
Post, Cecil Omar	Jarvisville	Fr., M.D.
Posten, Roscoe Parriott	Morgantown	Fr., A.B.
Price, John Lester	New Brighton, Pa.	Bar Law
Prichard, Mahala Dorcas	Fairmont	Jun., A.B.
Pritt, Wayne Kennedy	Parsons	Bar Law
Pugh, Eliza Jane	Morgantown	Sen., A.B.
Pugh, Clyde Charles	Wheeling	Fr., B.S.C.E.
*Pyles, Frank James	Farmington	Fr., A.B.
Ramirez, Manuel Maria	San German, Porto Rico	Bar Law
Randal, Boyd	Martinsburg	Sen., A.B.
Reed, Robert Sidney	Boothsville	Soph., A.B.
Reeves, Roscoe	Fairmont	Soph., A.B.
Reger, David Bright	Buckhannon	Sen., A.B.
Reiner, Phinney Porter Thomas	Morgantown	Fr., B.S.
Reiner, Pearl Louise	Morgantown	Soph., A.B.
Reynolds, Harris Aquilla	Morgantown	Sen., B.S.C.E.
Rhodes, Herbert Kaufman	Chambersburg	Grad., A.M.
Rhodes, George Edward	Charleston	Sen., A.B.
A.B., Dickinson College, 1905		
Richmond, Fred Saul	New Richmond	Special
Riley, Frank Henry	Chester	Special
Riner, Robert Elmer	Johnsons Roads	S. C. Agr.
Ritz, Russell Sage	Bluefield	Sen., Dip. Law
Riddle, James Harrison	Wheeling	Soph., B.S.C.E.
*Rider, Paul	Wheeling	Fr., M.D.
Roberts, Gertrude	Wheeling	Sen., A.B.
Roberts, Lakin Fiske	Grafton	Sen., A.B.
Robinson, John Lourie	Uniontown, Pa.	Soph., A.B.
Robinson, John Henry	New Martinsville	Jun., Dip. Law
*Rogers, Harold Thomas	Moundsville	Fr., B.S.
Ross, Arthur Reid	Hedgesville	Fr., B.S.C.E.
Ross, Charles Burt	Masontown	S. C. Agr.

Ross, Donald	Morgantown	Jun., B.S.
Russell, John Manning	Morgantown	Sen., B.S.C.E.
Ryan, Lonnie Watterson	Morgantown	Soph., B.S.C.E.
Rymer, Henry Floyd	Weston	Bar Law
Sander, Frank Vanderslice	Wheeling	Fr., B.S.
*Sanger, Samuel Henry	Sanger	Fr., B.S.M.E.
Satterfield, Russell Layman	Fairmont	Soph., B.S.
Schneider, Eugene Henry	Mineralwells	Special
Scott, Elliott Clyde	Beckley	Jun., Dip. Law
Scott, Mary Olive	Columbus, Ohio	Special
Scott, William Emmett	Lewisburg	Grad., A.M.
A.B., West Virginia University, 1904		
*Scott, George Vane	Chester	Fr., M.D.
Scott, Halleck McGinnis	Beckley	Jun., Dip. Law
Seger, Wilbert Frank	Ligonier, Pa.	Jun., Dip. Law
Selby, Lloyd Blaine	Morgantown	Grad., M.E.
B.S.M.E., West Virginia University, 1908		
Sencindiver, Carroll T.	Martinsburg	Bar Law
Shafer, Guy Carlton	Independence	S. C. Agr.
Shank, Myra Louis	Auburn, N. Y.	Special
Shean, James Fred	Morgantown	Fr., A.B.
Sheets, Arthur	Lost Creek	S. C. Agr.
Sheets, Earl Wooddell	Lost Creek	Sen., Dip. Agr.
Sheets, Harry Wilbur	Lost Creek	Sen., Dip. Law
Sheets, Goldie	Morgantown	Soph., A.B.
Shelton, Andrew Kemper	Huntington	Sen., Dip. Law
Shepler, Katharine Emma	Scottdale, Pa.	Soph., A.B.
Sheppard, Creed Collins	Walton	Sen., B.S.M.E.
†Shough, George Milton	Hundred	Fr., B.S.
*Shores, Henry Gassaway	Keyser	Jun., Dip. Law
Shreve, Jacob Francis	Burchfield	Sen., A.B.
Shrewsbury, James Bryant	Beckley	Bar Law
Shurtleff, Oliver	Fairmont	Fr., A.B.
Sherman, Albert	Amos	Bar Law
Simmons, Mary Frances	Morgantown	Special
Six, Sida Jane	St. Cloud	Soph., A.B.
Smith, Boyd Milford	Elkins	Soph., LL.B.
Smith, Charles John	Whipple, Ohio	Bar Law
Smith, Lester Meredith	Walkersville	Bar Law
Smith, Rennie Blanche	Frankford	Soph., A.B.
Smith, Lillian Ballard	Morgantown	Sen., A.B.
Smith, Enoch	Elm Grove	Bar Law
Smith, Leola May	Morgantown	Fr., A.B.

†Deceased

Smith, Lee Allan	Morgantown	Grad., A.M.
A.B., West Virginia University. 1908		
Smith, Edith Scott	Morgantown	Fr., A.B.
Smith, Everett Clerc	Ravenswood	Jun., B.S.C.E.
Smith, Susan Louise	St. Marys	Fr., A.B.
Smith, Howard Haslett	Butler, Pa.	Sen., B.S.
Sloan, Charles Elonzo	Meadville	Special
Snyder, Hubert Earl	Morgantown	Sen., B.S.C.E.
Solins, Samuel	Kimball	Bar Law
Speare, Wilma Carrie	West Liberty	Fr., A.B.
Sperling, Harry Edward	Swanton, Ohio	Special
Spencer, Ward Humphrey	Morgantown	Fr., B.S.M.E.
Spiker, Claud Carle	Masontown	Fr., A.B.
Staats, Georgia Lee	Spencer	Fr., A.B.
Stansbury, Herbert Earl	Marshes	Jun., Dip. Law
Starbuck, William Henry	Parkersburg	Soph., B.S.M.E.
Starbuck, Theodore Wilbur, Jr.	Parkersburg	Fr., B.S.E.M.
*Starcher, George Columbus	Weston	Jun., B.Agr.
Stealey, Genevieve	Clarksburg	Soph., A.B.
Steele, Eleanor Victoria	Morgantown	Jun., A.B.
Stemple, Minnie Frances	Morgantown	Special
Stemple, Bertha Matilda	Morgantown	Special
Stemple, Forest Wilbur	Aurora	Soph., B.S.M.E.
A.B., West Virginia University, 1908		
Stemple, Rodney Milton	Aurora	Soph., B.S.
*Stilphen, Harry Leslie	Gardiner, Maine	Fr., M.D.
Stockton, Frances Louise	Hampden, Mass.	Special
Stout, Mabel	Clarksburg	Sen., A.B.
Stout, Meigs John	Clarksburg	Vet. Sc.
Stout, George	Lost Creek	S. C. Agr.
Stulting, Harry Cooper	Alderson	Soph., B.S.C.E.
*Sturgiss, Anna Gans	Morgantown	Fr., A.B.
Sullivan, Mae Burnice	Huntington	Sen., A.B.
Swan, Robert A.	Morgantown	S. C. Agr.
Swearingen, Edwin Lewis	New Cumberland	Diploma Agr.
Swecker, Cleophus	Century	Sen., B.S.C.E.
Swisher, C. F.	Jane Lew	S. C. Agr.
Swisher, Isaac Marion	Lost Creek	S. C. Agr.
Sydenstricker, Harry Sydney	Morgantown	Fr., B.S.Agr.
Symms, Clarence	Lindside	S. C. Agr.
Taylor, Otha Reece	Toll Gate	Vet. Sc.
Taylor, Marvin Lucius	Elkins	Soph., B.S.C.E.
Taylor, Roscoe Shirley	Morgantown	Fr., B.S.
Tapp, Marion Ethel	Morgantown	Soph., A.B.

Teter, Claude Wesley	Buckhannon	Diploma Agr.
Tetrick, Claude Spray	Enterprise	Soph., B.S.C.E.
Thacher, William Reynolds	Williamsburg	Soph., A.B.
Thayer, Ralph Thomas	Oakland, Maryland	Jun., B.S.C.E.
Theakston, Pauline	Morgantown	Soph., A.B.
Thompson, Lonnie Vandiver	Three Churches	Jun., Dip. Law
Tompkins, Harold Preston	Cedar Grove	Soph., LL.B.
Torrance, Fannie Naff	Morgantown	Special
Torrance, Andrew Alphonso	Morgantown	Jun., B.S.
Trent, William Woodson	Runs	Sen., A.B.
Tuckwiller, David	Lewisburg	S. C. Agr.
Tuckwiller, Edward Hill	Morgantown	Soph., A.B.
Tuttle, Rena Frances	Scrafford	Jun., A.B.
Twyford, George Truman	West Union	Soph., B.S.M.E.
Van Bibber, Cyrus Biggs	Huntington	Sen., A.B.
Vance, Helen Blanche	Erie, Pennsylvania	Jun., A.B.
Vance, Joseph Cochran	Morgantown	Jun., A.B.
*Vandale, Fred E.	Schilling	Fr., B.S.C.E.
Vandervort, Hu Swisher	Morgantown	Soph., B.S.Agr.
*Vieweg, George Bowers	Wheeling	Fr., B.S.M.E.
*Walkup, Homer Allen Lepps	Falling Springs	Fr., B.S.
Warden, Rhea Watson	Grafton	Fr., A.B.
Waters, Gladys Mary	Morgantown	Fr., A.B.
Watkins, Miflin Marsh	Wheeling	Fr., LL.B.
Watkins, Grace Minette	Grafton	Grad., A.M.
A.B., West Virginia University, 1906		
Watson, Roger Earl	Martinsburg	Jun., Dip. Law
Wayt, William Henry	St. Marys	Grad., A.M.
A.B., West Virginia University, 1907		
Weadon, Karl Harper	Mt. Carbon	Jun., Dip. Law
Weaver, Archie Carlton	Morgantown	Senior, B.S.
*Wells, Walter Freeland	Charleroi, Pa.	Fr., B.S.
Wells, James Russell	Ben's Run	S. C. Agr.
West, Thomas	Williamson	Bar Law
Wheat, Harry Grove	Davis	Fr., A.B.
White, Wilson Henry Stout	Canton	Jun., A.B.
White, George Evans	Weston	Bar Law
White, Herbert Harold	Terra Alta	Fr., LL.B.
White, Horance Laban	Canton	Jun., A.B.
Wichterman, Arthur Valentine	Hastings	Diploma Agr.
Wiestling, Helen Merwin	Wheeling	Soph., A.B.
Wiley, Harry Ruffner	Malden	Jun., B.S.C.E.
Williams, Arthur Robert	Tunnelton	Vet. Sc.
Williams, Phil	Romney	Diploma Agr.

Willis, Dennis Martin A.B., West Virginia University, 1905	Morgantown	Graduate
Willis, Arthur Burton	Shinnston	Vet. Sc.
Wilmoth, Emily Josephine	Elkins	Soph., A.B.
Wilson, Lucy Chilton	Morgantown	Junior A.B.
Wilson, Charles Bruce	Winifrede	Fr., B.S.C.E.
Wilson, Lewis Leitch	Winifrede	Soph., B.S.M.E.
Wilson, Stella Rebecca	Harrisville	Soph., A.B.
Winer, Aaron	Morgantown	Sen., Dip. Law
Wolfe, Noble Abner	Morgantown	Jun., B.S.M.E.
Wolfe, Viola Amanda	Morgantown	Jun., A.B.
Yager, Mary Louise A.B., West Virginia University, 1903	Wheeling	Grad., A.M.
Yoke, Frank Roy A.B., West Virginia University, 1903	Morgantown	Grad., A.M.
Yount, Carl Cossman	Morgantown	Soph., M.D.
Yount, John Arndt	Morgantown	Special
Young, Harry Robert	Duquesne, Pa.	Special
Young, Loyd Clark	Palestine	Vet. Sc.
Young, Egbert Elmer	Easy	Bar Law
Zinn, Waitman Farnsworth	Troy	Soph., M.D.

STUDENTS IN THE FOUR-YEAR MEDICAL COURSE

Now Enrolled in the College of Physicians and Surgeons, Baltimore, Maryland

Campbell, Ovid Sylvester	Volga	Special
Callison, James G.	Huntington	Senior
Giorgessi, Guiseppe	Morgantown	Special
Hall, Archie Carl Moses	Buckhannon	Special
Harper, Willie Glenn	Elkins	Special
Hunter, William Byrd	Citie	Special
Knight, Arthur Clyde	Mt. Clare	Senior
Riffe, James Alfred	Hinton	Senior
Smith, Amos Elbridge	Morgantown	Senior
Sisler, Frank Herbert	Morgantown	Junior
Tuckwiller, Jesse Ray	Lewisburg	Junior

THE UNIVERSITY COLLEGES—SUMMARY OF ENROLLMENT FOR 1908-9

(as far as reported May 1, 1909.)

THE COLLEGES	Number in faculty	Degrees granted, 1908	Diplomas granted, 1908	CANDIDATES FOR Degrees								CANDIDATES FOR Diploma or Certificate			Special Students			Irregular and Short Course Students			Total Number of Students		
				Grad.	Sen.	Jun.	Soph.	Fresh.	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.	Total
Arts and Sciences	36	25	...	32	39	35	43	65	124	90	214	...	...	...	15	21	36	...	...	...	139	111	250
Engineering	10	12	...	2	20	23	21	37	103	...	103	...	...	...	...	...	...	...	...	...	103	...	103
Agriculture	5	...	...	...	1	1	2	5	9	...	9	22	...	22	...	...	...	50	2	52	81	2	83
Law	6	10	14	...	4	5	6	10	25	...	25	55	...	55	47	...	47	...	...	...	127	...	127
Medicine	2	7	...	...	...	1	5	12	18	...	18	...	...	...	...	...	...	...	...	...	18	...	18
Total	60	54	14	34	64	65	77	129	279	90	369	77	...	77	62	21	83	50	2	52	468	113	581

STUDENT ENROLLMENT BY STATES

West Virginia	524
Pennsylvania	30
Ohio	8
New York	4
Maryland	3
Puerto Rico	3
Connecticut	1
New Jersey	1
Massachusetts	1
Maine	1
Washington, D. C.	1
Virginia	1
Canada	1
Sweden	1
Brazil	1

NUMBER IN FACULTY

Professors Emeritus	2
Professors	35
Associate Professors	5
Assistant Professors	5
Instructors	7
Assistants	6
Library staff	5
Total	65

STUDENT ASSISTANTS

The following students, though not regularly appointed as members of the teaching force of the University, acted as laboratory assistants during the year:

In the Department of Chemistry:
JAMES ROY ECKMAN and LAWRENCE PAYNE FORMAN

In the Department of Civil Engineering:
JOHN MANNING RUSSELL

In the Department of Physical Training:
CLIFFORD RENWAR MYERS, ROBERT LEE COLE, and REBECCA CORE as assistants; GEORGE WALTER GROW, HERMAN DEIDLER POCOCK, and FRENCH McCRAY as leaders of squads

In the Department of Zoology:
KARL SPENCER LASHLEY

WEST VIRGINIA UNIVERSITY

CATALOGUE
1908 - - 1909

ANNOUNCEMENTS
1909 - - - 1910

THE SCHOOLS

MORGANTOWN, WEST VIRGINIA
PUBLISHED BY THE UNIVERSITY

CONTENTS

Calendar 4
Board of Regents 6
Officers of Instruction and Administration 7
School of Music 15
School of Fine Arts 25
Summer School 28
Commercial School 56
Preparatory School 64
Agricultural Experiment Station 76
Diplomas and certificates 78
List of students 79
Summary of Enrollment 97
Index 98

CALENDAR

1909

JULY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

OCTOBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

NOVEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1910

JANUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1910

JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

CALENDAR

1909

June 21, Monday.....Summer School Begins
July 30, Friday.....Summer School Ends
September 20, Monday.....Fall Quarter Begins
September 20, 21, 22, Monday, Tuesday, and Wednesday.....
.....Entrance Examinations
September 20, 21, 22, Monday, Tuesday, and Wednesday.....
.....Matriculation and Registration of Students
September 22, Wednesday, 8:30 P. M.....Fall Convocation
September 23, Thursday.....Recitations of Fall Quarter Begin
November 25 to November 28.....Thanksgiving Recess
December 14, Tuesday.....Last Recitations of Fall Quarter
December 15, Wednesday, to December 17, Friday, inclusive.....
.....Final Examinations of Fall Quarter
December 18, Saturday, to January 3, 1910.....Quarterly Recess

1910

January 4, Tuesday (Registration Day).....Winter Quarter Begins
January 4, Tuesday, 8 P. M.....Winter Convocation
January 5, Wednesday.....Recitations of Winter Quarter Begin
February 22, Tuesday.....Washington's Birthday, a Holiday
March 22, Tuesday.....Last Recitations of Winter Quarter
March 23, Wednesday, to March 25, Friday.....
.....Final Examinations of Winter Quarter
March 25, Friday.....Winter Quarter Ends
March 26, Saturday, to March 28, Monday.....Quarterly Recess
March 29, Tuesday (Registration Day).....Spring Quarter Begins
March 29, Tuesday, 8 P. M.....Spring Convocation
March 30, Wednesday.....Recitations of Spring Quarter Begin
May 30, Monday.....Memorial Day, a Holiday
June 7, Tuesday.....Last Recitations of Spring Quarter
June 8, Wednesday, to June 11, Saturday, inclusive.....
.....Final Examinations of Spring Quarter
June 15, Wednesday.....Commencement

BOARD OF REGENTS

For the Term Beginning May 19, 1905

C. E. HAWORTH, Huntington
E. M. GRANT, Morgantown
T. P. JACOBS, New Martinsville
D. C. GALLAHER, Charleston

For the Term Beginning May 19, 1907

F. P. McNELL, Wheeling
Z. TAYLOR VINSON, Huntington
J. B. FINLEY, Parkersburg
C. M. BABB, Falls
LUTHER C. ANDERSON, Welch

OFFICERS OF THE BOARD

C. M. BABB.....PRESIDENT
J. S. STEWART.....SECRETARY
A. R. WHITEHILL.....TREASURER
T. E. HODGES.....ASSISTANT TREASURER
W. J. WHITE.....AUDITOR
F. L. EMORY.....SUP'T OF BUILDINGS AND GROUNDS

OFFICERS OF ADMINISTRATION AND INSTRUCTION

THE OFFICERS OF THE UNIVERSITY

DANIEL BOARDMAN PURINTON, Ph.D., LL.D., President

POWELL BENTON REYNOLDS, D.D., Chaplain

WAITMAN BARBE, Litt.D., Assistant to the President and Field Agent

SUSAN MAXWELL MOORE, Dean of Women

ALFRED JARRETT HARE, A.M., Registrar

ALEXANDER REID WHITEHILL, Ph.D., Treasurer

THOMAS EDWARD HODGES, A.M., Assistant Treasurer

WILLIAM J. WHITE, Auditor

FREDERICK LINCOLN EMORY, M.E., Superintendent of Buildings and Grounds

THE UNIVERSITY COUNCIL

Daniel Boabdman Purinton

Harry Anthony Eaton

Alfred Jarrett Hare

Alexander Reid Whitehill

Waitman Barbe

Powell Benton Reynolds

Charles Edgar Hogg

Thomas Clark Atkeson

Frederick Wilson Truscott

Will Hazen Boughton

Robert Allen Armstrong

STANDING COMMITTEES

Classification and Grades

Thomas Edward Hodges
Jasper Newton Deahl
Alfred Jarrett Hare
Clement Ross Jones
James Morton Callahan

Ways and Means

Charles Henry Patterson
John Arndt Eiesland
William P. Willey
Frederick Lincoln Emory
Ross Spence

Athletics

Henry Sherwood Green
Anthony Wencel Chez
Thomas Edward Hodges
Harry Anthony Eaton
Dennis Martin Willis

Students' Aid

Russell Love Morris
Henry Mace Payne
William Jackson Leonard
Frederick Lawrence Kortright
Rufus West

Library

Nathaniel Lewis Goodrich
Henry Sherwood Green
James Morton Callahan
Albert Moore Reese
Charles Henry Patterson

Women Students

Grace Martin Snee
Susan Maxwell Moore
Margaret Buchanan
Louise Ferris Chez
Eva Emma Hubbard

Stationery and Printing

John Harrington Cox
Oliver Perry Chitwood
Simeon Conant Smith
Frank Butler Trotter
David Dale Johnson

THE FACULTY

DANIEL BOARDMAN PURINTON, Ph.D., LL.D. President's House

President and Professor of Philosophy

A.B., West Virginia University, 1873; A.M., *ibid.*, 1876; Ph.D., University of Nashville, 1892; LL.D., Denison University, 1889. Instructor, Preparatory Department of West Virginia University, 1873-8; Professor of Logic, *ibid.*, 1878-81; Professor of Mathematics, *ibid.*, 1881-5; Professor of Metaphysics, *ibid.*, 1885-9; Vice-President and Acting President, *ibid.*, 1881-2; Instructor in Vocal Music. *ibid.*, 1873-89; President, Denison University, 1890-1901; present position since 1901.

ALFRED JARRETT HARE, A.B., A.M. 411 High Street

Professor of Latin Language and Literature and Principal of the Preparatory School

A.B., West Virginia University, 1889; A.M., *ibid.*, 1902; Graduate student, Harvard University, 1901. Assistant in Latin and Mathematics, Preparatory School, West Virginia University, 1889-96; Preparatory Professor of Ancient Languages and Mathematics, *ibid.*, 1896-8; Professor of Latin, 1898-1901; present position since 1901.

SUSAN MAXWELL MOORE Willey Street

Dean of Women and Instructor on the Piano

Student in Peabody Institute, Baltimore, Maryland, 1878-9; Student in New England Conservatory, Boston, Massachusetts (Piano, Carl Faelten; Organ, George E. Whiting), 1885-7. Teacher of Piano, Mount Holyoke College, Massachusetts, 1887-91; Student in Berlin (Piano, Oscar Raif), 1891-2; Teacher of Piano, Conservatory of Music, Ottumwa, Iowa, 1892-3; Head of Piano Department, Shepardson College and Denison University, Granville, Ohio, 1893-1903; Summer Course under Carl Faelten, Boston. Massachusetts, 1898; Faelten Piano School, Summer, 1901; present position since 1903.

ANTHONY WENCEL CHEZ, A.B. 748 North Front Street

Director of Physical Training

Graduate, Chautauqua School of Physical Education, 1902; Graduate, Harvard School of Physical Training, 1903; A.B., West Virginia University, 1907. Graduate Coach, Oberlin College, 1899; Director of Gymnasium and Athletic Coach, Wabash College, 1900-1; Professor of Physical Training and Athletic Coach, DePauw University, 1901-2; Director, Physical Culture and Athletic Coach, University of Cincinnati, 1902-4; Assistant, Harvard Summer School of Physical Training, 1905; present position since 1904.

ROSS SPENCE Peabody Annex

Director of the School of Music and Instructor on Stringed Instruments

Graduate, University School of Music, Ann Arbor, Michigan, 1897; Pupil of Emanuel Wirth, Berlin, 1897-1900. Member, Boston Festival Orchestra, 1901; Instructor on Stringed Instruments, West Virginia University, 1901-4; present position since 1904.

HARRY ANTHONY EATON, A.B., LL.B. 299 Grand Street

Captain U. S. Army, Professor of Military Science and Tactics and Commandant of Cadets

A.B., West Virginia University, 1897; LL.B., *ibid.*, 1898. Sergeant Major 1st West Virginia Volunteers, May 14 to 22, 1898; 1st Lieut. 1st West Virginia Volunteers to July 21, 1898; 2nd Lieut. 8th United States Infantry, July 22, 1898; Served in that regiment until promoted Captain, August 22, 1903, and assigned to 23rd United States Infantry; present position since 1907.

WILLIAM JACKSON LEONARD 36 University Driveway

Associate Professor and Head of the Department of Fine Arts

Student, The Cowles Art School, Boston, 1889-90; Pupil of Jean Paul Laurens and Benjamin Constant, Paris, 1891-3; Student, Academie Julien and Ecole des Beaux Arts, Paris; Special student, Harvard University. Instructor in Fine Arts, West Virginia University, 1900-2; present position since 1902.

SIMEON CONANT SMITH, A.B., A.M. 107 High Street

Assistant Professor of Rhetoric and Instructor in English in the Preparatory School

A.B., Tufts College, 1898; A.M., West Virginia University, 1902; Graduate student, Harvard University, 1903-4. Fellow in Rhetoric and Elocution, West Virginia University, 1899-1900; Instructor in Rhetoric and Assistant in English in the Preparatory School, 1900-6; present position since 1906.

DENNIS MARTIN WILLIS, A.B., LL.M. 242 Jackson Avenue

Principal of the Commercial School

LL.B., West Virginia University, 1899; A.B., *ibid.*, 1905; LL.M., *ibid.*, 1908. Instructor, West Virginia Conference Seminary, Buckhannon, 1891-2; Instructor, Northwestern Academy, Clarksburg, 1893-4; present position since 1895.

EVA EMMA HUBBARD 265 Academy Place

Instructor in Drawing and Painting

Graduate, Morgantown Female Seminary, 1876; Student in Mrs. I. P. Winkinson's Studio, Wheeling, 1881-2. Instructor in Drawing and Painting, Wheeling Female College, 1883-4; Student in Carl Hecker's Art School, New York City, 1884-5; Instructor in Fine Arts, Mountain Lake Park Summer Chautauqua, 1885-8; Instructor in Drawing and Painting, Mrs. M. Stevens Hart's School for Young Ladies, 1894-7; present position since 1897.

GRACE MARTIN SNEE, B.M. 657 Spruce Street

Instructor on the Piano and Pipe Organ

Graduate, Virginia College for Young Ladies, 1893; B.M., *ibid.*, 1894. Instructor in Piano Department, *ibid.*, 1893-4; Graduate student, Peabody Institute, Baltimore, 1895-6; Assistant on the Piano, West Virginia University, 1897-1901; present position since 1901.

RUDOLF WERTIME 31 Wilson Street

Instructor on the Piano

Pupil in the Royal High School of Music, Berlin, 1894-8, under Professor Raif, Bargiel, Wolff, and Von Herzogenberg. Teacher in the Clinton Liberal Institute, New York, 1898-1900; Graduate work with the Conrad Ansorge, Berlin, 1900-1; present position since 1903.

DAVID DALE JOHNSON, A.B., A.M. 375 Spruce Street

Instructor in English

A.B., Marietta College, 1896; A.M., West Virginia University, 1903; A.M., Marietta College, 1906; Graduate student, University of Chicago, 1899 and 1902, Harvard University, 1908. Instructor in Latin and Sciences, Parkersburg High School, 1896-7; Instructor in German and Latin, Marietta Academy, 1897-8; Instructor in English, Parkersburg High School, 1898-1902; Assistant in English, West Virginia University, 1902-7; present position since 1907.

EDWARD RICHTER, LL.D. 208 High Street

Instructor in Vocal Music

LL.D., University of Vienna, 1880; Student in Vienna Conservatory, 1879-83; Student of Dr. Lenar Browne, London, 1899. Teacher in New York College of Music, 1901-3; in St. John's School, California, 1903-4; in Nebraska, Wesleyan University, 1904-5; present position since 1907.

CLARENCE POST, A.B. 45 Stewart Street

Instructor in Physics

A.B., West Virginia University, 1907; Graduate student, Cornell University, Summer of 1907. Present position since 1907.

MABEL CONSTANCE FOSTER 271 Grand Street

Assistant in Piano

Student in Conservatory of Music, Philadelphia, 1891-2; Pupil of Von Westernhagen, Philadelphia, 1893; Pupil of Elisa Mazzucato Young in Harmony, 1897-1901; Student in Sherwood School of Music 1901-2; present position since 1902.

LOUISE FERRIS CHEZ 748 North Front Street

Assistant Director of Physical Training, in charge of the Woman's Gymnasium

Graduate, Chautauqua School of Physical Education, 1902; Graduate work in Massage and Swedish System. Assistant to Jakob Bolin of New York City in Clinic of Corrective and Orthopedic Gymnastics, 1903; Director of Physical Training for Women, DePauw University, 1901-2; Director of Physical Culture for Women, University of Cincinnati, 1903-4; present position since 1904.

MARGARET BUCHANAN, A.B. 304 Willey Street

Assistant in Greek and Mathematics

A.B., West Virginia University, 1906. Teacher in Marshall College, 1906-7; present position since 1907.

W. A. MESTREZAT South Morgantown

Assistant in Music (Wind Instruments)

Pupil of W. H. Stowe, G. Oeschsle, and F. B. Heuber. Member 21st United States Infantry Band; Chief Musician, 1st West Virginia Volunteer Infantry, in Spanish War, and 30th United States Volunteer Infantry, in Philippines; present position since 1902.

THOMAS BOND FOULK, B.S.C.E. 509 Front Street

Assistant in Mathematics in the Preparatory School and Graduate Manager of Athletics

B.S.C.E., West Virginia University, 1908. Present position since 1908.

HELEN LOVELAND TREAT 353 Wilson Avenue

Assistant in Music

Artists' Diploma, School of Music, West Virginia University, 1908. Present position since 1908.

FRANCIS WILLARD STEELE Alexander Avenue, South Park

Assistant in Shorthand and Typewriting

SPECIAL SUMMER SCHOOL INSTRUCTORS AND LECTURERS

EDWARD HOWARD GRIGGS, A.M.

(Formerly Professor of Education and Ethics in Leland Stanford University) Ethics; English Literature

SAMUEL TRAIN DUTTON, A.M.
(Professor of School Administration in Teachers' College, Columbia University) Education

MICHAEL VINCENT O'SHEA, B.L.
(Head of the Department of Education in the University of Wisconsin) Education

EARL BARNES, B.A., M.S.
(Formerly Professor of Education in Leland Stanford University) History; Education

WILLIAM M. GIFFIN, A.M., PD.D.
(Principal, Willard School, Chicago) Special Method in Teaching Arithmetic; Special Method in Teaching Reading

CLARA MABEL WHEELER
(Horace Mann School, Columbia University) Primary Department; Observation Classes

IDA CASSA HEFFRON
(Formerly Instructor in Drawing in the Cook County, Chicago, Normal School) Public School Drawing, Modeling, and Painting

JOHN PORTER LAWRENCE
(Director of the Piano Department, National Park Seminary, Washington, D. C.) Piano and Organ

ANTON KASPER
(Concert Master, Georgetown Orchestra, Washington, D. C.) Violin

CHARLES GALLAUDET TRUMBULL, A.B.
Editor, The Sunday School Times, Philadelphia

REV. H. T. MUSSELMAN
Of Philadelphia, Superintendent, Teacher Training Department, American Baptist Publication Society

REV. GEORGE WHITEFIELD MEAD, PH.D.
Pastor, Second Presbyterian Church, Pittsburg, Pa.

JOSEPHINE L. BALDWIN
Of Newark, New Jersey, Junior Lesson Writer for the Methodist Episcopal and Presbyterian Boards

MARY FOSTER BRYNER
Of Peoria, Illinois, Field Worker, International Sunday School Association

MRS. J. W. BARNES
Of Newark, New Jersey, Elementary Superintendent of the International Sunday School Association

W. C. SHAFER
General Secretary, West Virginia Sunday School Association

REV. C. HUMBLE, M.D.
Superintendent, Presbyterian Sunday School Missions for Kentucky, Tennessee, and West Virginia

AGRICULTURAL EXPERIMENT STATION STAFF

JAMES H. STEWART, A.M. — 118 Willey Street
Director and Agriculturist

BERT HOLMES HITE, M.S. — Peabody Hotel
Vice Director and Chemist

WILLIAM EARL RUMSEY, B.S.AGR. — 415 Park Street
Entomologist

WELTON MARKS MUNSON, PH.D. — 25 Wilson Avenue
Horticulturist

NAHUM JAMES GIDDINGS, M.S.
Bacteriologist

FREDERICK E. BROOKS
Associate Entomologist

HORACE ATWOOD, M.S.AGR. — Experiment Station Farm
Assistant Agriculturist

FRANK BATSON KUNST, A.B. — Garlow Building, High Street
Assistant Chemist

CHARLES EDWARD WEAKLEY, JR. — 415 Park Street
Assistant Chemist

ARTHUR LINCOLN DACY, B.Sc. — 63 Grandview Avenue
Assistant Horticulturalist

HOWARD E. WILLIAMS
Special Agent on Highways

WILLIAM J. WHITE — Marion Street
Clerk

MARTHA A. STEWART — 118 Willey Street
Librarian

ALICE ENGLE — 247 Willey Street
Stenographer

THE SCHOOL OF MUSIC

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

ROSS SPENCE, *Director, Instructor on Stringed Instruments*

RUDOLF WERTIME, *Instructor on the Piano*

EDWARD RICHTER, *Instructor in Vocal Music*

GRACE MARTIN SNEE, *Instructor on the Piano and Pipe Organ*

SUSAN MAXWELL MOORE, *Instructor on the Piano*

MABEL CONSTANCE FOSTER, *Instructor on the Piano and in Harmony*

WALTER A. MESTREZAT, *Instructor on Wind Instruments*

HELEN LOVELAND TREAT, *Assistant in Music*

BUILDING AND EQUIPMENT

The school now occupies the entire upper floor of Woodburn Hall, which contains well appointed rooms, supplied with Knabe pianos and other accessories. A new recital hall, seating 400 people, has been provided for lectures and students' recitals.

Commencement Hall, seating 1,500 people, contains a magnificent three-manual pipe organ, tubular pneumatic—built upon the universal wind-chest system and containing 76 stops and mechanical accessories. This organ, which receives power from an electric motor, is available for practice.

MUSIC LIBRARY

A music library of over 3,000 copies of music has recently been added to the school. The best standard publications are kept in stock, and new publications are added as soon as placed on the market.

CONCERTS AND RECITALS

CHORAL SOCIETY SERIES

A series of concerts, called the choral society series, is given during the year, in which the choral society at times takes part. The closing concert of this series is given by the faculty at commencement. Music students are expected to attend them as part of their instruction.

STUDENTS' RECITALS

These recitals have been established as a means of developing confidence in the student. Some are open to the public, others to the intimate friends of the participants only. They are held once a week during the year.

THE CHORAL SOCIETY

All students of the University who can sing are admitted to the choral society upon payment of fifty cents, the membership fee. For those who are not students the fee is $1.00. These dues admit the members to all concerts of the choral society series.

GENERAL ANNOUNCEMENTS

Students may enter the School of Music at any time, but it is greatly to their interest to enter, as far as possible, at the beginning of the quarter.

Students entering within the first two weeks of a quarter will be charged for full quarter; after that time, for the remainder of the quarter and one week additional.

There is no deduction made for lessons missed by students except in case of prolonged illness, when the loss is divided equally between the student and the school.

Students of the School of Music are not allowed to take part in public programs or in musical organizations without the consent of their respective teachers and the director of the school.

All music students are expected to attend the regular students' recitals, and to take part in them whenever so assigned, and to attend all concerts given under the auspices of the University. They are expected to identify themselves with the various organizations of

the school, and are required to enter any to which they are assigned by the director.

It is expected that all students will take sufficient work—literary or music, or both—to occupy their entire time.

CREDIT FOR MUSIC ON COLLEGE COURSES

Credit towards the degree of Bachelor of Arts will be given for courses in the science and history of music, not to exceed two and one-half in number.

COURSES OF STUDY

The School of Music offers instruction in each of the following subjects: vocal music, piano, violin, pipe organ, mandolin, band music, ensemble playing, harmony, counterpoint, and musical history. In vocal music, piano, and violin, two courses of study are offered, one of three years, leading to a teacher's certificate, and one of four years, leading to an artist's diploma.

REQUIREMENTS FOR ADMISSION

No student can be classified in the collegiate courses in music without passing an examination in solfeggio, or demonstrating to the satisfaction of the head of the department the ability to read music of moderate difficulty, and giving evidence of the mastery of the elements of music.

In the preparatory courses, to which children only are admitted, no previous knowledge of music is required.

REQUIREMENTS FOR GRADUATION

GENERAL REQUIREMENTS

Candidates for a teacher's certificate in any of the three courses mentioned above must have satisfactorily completed the first four courses in English in the University Preparatory School, or their equivalent. They must also have completed three courses (one year) in harmony.

Candidates for an artist's diploma in any course are required to give a graduating recital. Artistic finish and quality of performance in this recital are decisive factors in determining the award of this diploma.

VOCAL MUSIC

Candidates for the teacher's certificate in vocal music, in addition to the above general requirements, must have satisfactorily completed the three-year course in vocal music as outlined below, and must possess the ability to perform acceptably selections from the standard oratorios and operas. They must also have completed three courses (one year) in each of the modern languages—French, German, and Italian.

Candidates for the artist's diploma in vocal music must satisfy all the general requirements and the requirements for the teacher's certificate, and must have completed the course in the history of music, and the fourth year's work in vocal music.

PIANO

Candidates for the teacher's certificate in piano, in addition to the general requirements, must have satisfactorily completed the three-year course outlined below, including compositions covering the classical and romantic periods, and also the lighter works of some modern composers. They must also have satisfactorily completed the course in the history of music and the course in ensemble playing.

Candidates for the artist's diploma in piano, in addition to the general requirements and the work required for a teacher's certificate, must have completed the four-year course in piano and the course in counterpoint. Particular emphasis is placed upon the graduation recital for students in the piano course.

VIOLIN

Candidates for the teacher's certificate in violin, in addition to the general requirements, must have satisfactorily completed the three-year course in violin music as outlined below, including the concertos of Viotti, Rode, and Kreutzer, and the lighter works of some modern composers.

Candidates for the artist's diploma, in addition to the general requirements and the work required for the teacher's certificate, must have completed the four years' work in violin music, and the course in the history of music. They must also have some knowledge of piano playing.

Students desiring to become candidates for certificates or diplomas should note that while the above mentioned courses are referred to as three-year and four-year courses, no definite period of time can be assigned for their completion. In all cases certificates and diplomas are awarded on the basis of the proficiency acquired, rather than of the length of time devoted to the course.

DEPARTMENTS OF INSTRUCTION

Strict adherence to a fixed list of studies is not required. The needs of the individual student are considered and the studies varied accordingly. New works are carefully examined by the musical directors and those of value are adopted. An idea of the work covered in the different classes may be obtained from the following.

VOCAL MUSIC

Mr. Richter

The aim of this course is to approach the method of the Italian masters as manifested in the sonority, purity, flexibility, and *bel canto* of the voices of the pupils. To this end the elementary training is given prominence in the first and second years. The last two years are devoted to the art of singing and to repertoire, and to fitting the students for a musical career both as teachers and performers.

First Year. Exercises in breathing, attack, resonance, flexibility, legato; Concone's Lessons; Bordogni's Vocalises; Marchesi's Studies; songs in moderate ranges and simple sentiment from all periods of composition.

Second Year. Concone's Lessons; Bordogni's Vocalises, and others according to the necessities of each student; songs by classic, romantic, and modern composers of the French, German, and Italian schools.

Third Year. The art of singing; discussion of methods of Concone, Damoreau, Kablache, Stockhausen, and Garcia with exercises; oratorio and modern songs of higher degree of difficulty in sentiment, execution, and range.

Fourth Year. The art of singing continued; opera, oratorio, and songs; preparation in opera and oratorio parts.

Preparatory Vocal Course

The work in this course consists of private lessons, and is at present in charge of the head of the department. Beginners' classes have two sessions a week.

PIANO

Mr. Wertime, Mrs. Snee, Miss Moore, Miss Foster, and Miss Treat

The course in this department is intended to meet the varying needs of individual pupils, with the idea of furnishing a comprehensive, rather than a rigid, inelastic, training in piano-forte technique. While

the acquirement of finger dexterity is necessary, the value and importance of the mental training to be obtained from the study of music is emphasized, and the course is expected to make apparent the advantage of a broad musical education.

The course required of candidates for teacher's certificates or artist's diplomas comprises compositions from the following masters: Bach, Haendel, Haydn, Mozart, Beethoven, Schubert, Weber, Mendelssohn, Schumann, Chopin, Henselt, Liszt, Rubinstein, Brahms, Greig, Saint-Saens, Moszkowski.

Preparatory Piano Course

The best time to begin the study of music is between the ages of seven and ten years, and the proper instrument for the first years of musical instruction is the piano, with its fixed scale and easily formed tones. Kindergarten methods should be avoided before beginning regular piano lessons. When the study of music is begun, it should be pursued as a part of the child's education, not as a pastime. Children taught in a well conducted music school come in contact with other pupils of their own age, and having an opportunity to measure their progress with that of others, they are not likely to become indifferent and apathetic.

The School of Music offers a well organized preparatory course, presided over by Miss Susan M. Moore, of The Faelton Piano-forte School, Boston, Massachusetts. The beginners' class has two sessions a week, one on Saturday morning, and one on Wednesday afternoon, after school hours. Pupils generally remain in this course for two years, at the end of which time it becomes necessary to give them more individual attention. Children in this department are taught sight-reading, transposition, and ensemble playing. They are required to do black-board exercises, and to have a thorough course in ear training.

VIOLIN

Director SPENCE

The mastery of the violin, requiring, as it does, years of specialized effort, tends to restrict students in their musical studies. This course aims to give a thorough training in all the essentials of violin playing, and at the same time to pave the way to a broader, more general culture, which is a part of the true musician's education.

The course required of candidates for the teacher's certificate comprises violin schools by David, Spohr, Sevcik; elementary studies

and exercises by Wohlfahrt, Dancla, Hermann, Kayser; etudes by Mazas, Kreutzer, Fiorillo, Rode; selections from De Beriot, Wieniawski, Viotti, Rode, etc.

The course required of candidates for the artist's diploma comprises, in addition to the above, Bach sonatas, concertos by Mendelssohn, Molique, Spohr, Kreutzer, Beethoven, Bruch, etc.

Preparatory Violin Course

A course in violin instruction is offered for children, corresponding to the courses of a similar nature in the vocal and piano departments. Children who have had no training in music are admitted to this class.

PIPE ORGAN

Mrs. SNEE

The organ course is intended to provide a thorough and complete education in the work of a church organist and accompanist. Students are required to take some studies on the piano before entering the organ school.

WOOD AND BRASS INSTRUMENTS

Mr. MESTREZAT

Opportunity is offered in this course to obtain the instruction necessary to fit one to play the various wood, wind and brass instruments used in orchestras and bands.

ENSEMBLE PLAYING

Director SPENCE

Ensemble playing is of great importance in the general musical education of a pianist. To play accompaniments well requires special ability and training. This course is intended to furnish opportunity to advanced pupils to acquire this ability, and to have practice in performing chamber music works by the best composers.

CHORUS SINGING

Mr. RICHTER

The choral society meets for rehearsal once each week, and affords opportunity to obtain the pleasure and benefit of chorus singing as well

as to acquire familiarity with the standard oratorios, one of which is produced each year.

PUBLIC SCHOOL MUSIC

Mr. RICHTER

In this course practical, individual practice in music reading will be carried on hand in hand with the study of the methods necessary in teaching children, so that students may be able to take up the work of teaching vocal music in the public schools according to the most advanced methods.

THEORY OF MUSIC

Director SPENCE and Miss FOSTER

1. **Harmony.** This course is designed to be a part of the general musical education of all students in the School of Music. It is of special assistance in the study of the piano, but is of value in every department of musical work. One-third course.

2. **Harmony.** Continuation of course 1. One-third course.

3. **Harmony.** Continuation of course 2. One-third course.

4. **Counterpoint.** This course is of special benefit to pianists and to teachers of music. Prerequisite, courses 1-3 in harmony. One-third course.

5. **Counterpoint.** Continuation of course 4. One-third course.

HISTORY OF MUSIC

Director SPENCE

6. **History of Music.** Knowledge of the origin and development of music is a requisite in a musical education. The course, though not extensive, is designed to acquaint the student with the fundamental and most important facts of the art. One-third course.

7. **History of Music.** Continuation of course 6. One-third course.

MODERN LANGUAGES

The close relation of the modern languages with music, and especially with vocal music, makes them important in every course of musical study. The inexhaustible and ever-increasing treasure of vocal music composed to German, French, and Italian texts makes a fair knowledge and correct pronunciation of these languages indispensable. The University offers superior advantages for the study of these languages.

TUITION PER QUARTER

The following table shows the rates of tuition for private lessons of thirty minutes in length:

	Number of lessons per week		
	One	Two	Three
Vocal:—			
EDWARD RICHTER	$15.00	$25.00	$35.00
Piano:—			
RUDOLF WERTIME	15.00	25.00	35.00
GRACE MARTIN SNEE	11.00	18.00	26.00
SUSAN MAXWELL MOORE	11.00	18.00	26.00
MABEL CONSTANCE FOSTER	10.00	16.00	23.00
Violin:—			
ROSS SPENCE	11.00	18.00	26.00
Mandolin:—			
ROSS SPENCE	12.00	20.00	
Pipe Organ:—			
GRACE MARTIN SNEE	15.00	25.00	
Wood and Brass Instruments:—			
WALTER MESTREZAT	8.00	12.00	
Ensemble Playing:—			
ROSS SPENCE	12.00	20.00	

For two class lessons per week, of thirty minutes each, the tuition is:

In harmony $12.00
In theory and musical history 10.00

The tuition for other classes is as follows:

Preparatory vocal music $7.50
(Classes of four to ten pupils)

Preparatory piano music	7.50
(Classes of four pupils)	
Preparatory violin music	7.50
Public school music	7.50

Piano for practice, one hour per day, will be furnished at $3.50 per quarter; two hours per day, $6.00 per quarter; three hours per day, $8.00 per quarter; four hours per day, $10.00 per quarter. Clavier practice, one hour per day, $3.00 per quarter.

Pipe organ practice, one hour per day, $7.00 per quarter.

No contingent fees are charged music students who take conversational French, German, or Italian, as required for their diplomas in music.

Music students who are residents of West Virginia, and who take work in other departments of the University, are subject to the usual charges for fees in these departments.

Any student in the School of Music who is not a resident of West Virginia, and who pays at least $16.00 a term for music, is permitted to take, in addition to music, one credit course each term free of charge, or two credit courses at one-half the usual charge; but in either case such student shall pay the matriculation fee of $5.00 upon first entering the academic department, and the contingent fee of $3.00 each term.

The fee for a diploma or teacher's certificate is $3.00.

Regularly enrolled students in the School of Music are required to pay the following athletic fees: for the Fall term, $2.00; for the Winter term, $1.00; for the Spring term, $2.00.

THE SCHOOL OF FINE ARTS

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

WILLIAM JACKSON LEONARD, *Associate Professor and Head of the Department of Fine Arts*

MRS. EVA EMMA HUBBARD, *Instructor in Perspective Drawing and Painting*

EQUIPMENT

The University provides large, well lighted studios, containing drawing stands, easels, etc., and a large collection of casts and models. Students have access to the University library, which contains a large and carefully selected collection of works on the history and development of the fine arts.

FEES

The regular classes in drawing and the history of art are open without charge to all students of the University, but in the special drawing and painting classes fees are charged, as follows:

For one quarter, three lessons weekly:

Special drawing	$ 5.00
Water color	10.00
China painting	10.00
Pastel painting	10.00
Oil painting	10.00

Students whose work is entirely in this school, and who take private work only, are not required to pay the usual University fees, but are entitled to all the privileges of the other University students—library, lectures, etc. Fees are payable in advance to the treasurer of the University for the art fund.

THE REGULAR ART COURSE

This course of four years is so planned that the student may acquire the technique of drawing and painting, a general art education, and a degree of aesthetic culture tending to develop the individual powers of composition and expression.

The work of the first year includes light and shade drawing from the antique, study of perspective, sketching from nature, drawings of still life, and study of form carried out in clay modeling. Color studies are introduced in the spring term.

In the second year the drawing is continued from cast in charcoal and crayon, copying the head, mask, and ornament from the antique. Color studies in water-colors and oil are given with the work in black and white.

During the third and fourth years, the student copies the bust and full length figure from the antique, paints from the draped model in the life class, and studies portrait painting and composition or sketching from nature, and landscape painting.

REQUIREMENTS FOR DIPLOMA

To those who complete this course of four years' study, making oil painting their major study and including the history of art, a diploma will be given.

THE NORMAL ART COURSE

This course is designed for teachers in public or normal schools. It comprises free-hand drawing of ornament, mask, and head from the antique; study of still life, perspective and mechanical drawing; sketching; study of design; study of color and form developed in water-color painting and clay modeling.

Class lectures are given on the teaching of form and color, and the history of art.

Students should spend two years in pursuing this course; but to suit individual needs, the course may be shortened, and what is most essential will be given in the time available.

CREDIT FOR FINE ARTS ON COLLEGE COURSES

Credit toward the Degree of Bachelor of Arts will be given for courses in Fine Arts not to exceed five in number.

COURSES OF INSTRUCTION

Associate Professor LEONARD

1. **Elementary Drawing.** The historic forms of art and their development. Lectures, with collateral reading and practice in drawing. Fall, 9:30; L.

2. **Elementary Drawing.** A continuation of course 1. Winter, 9:30; L.

3. **Elementary Drawing.** A continuation of course 2.
Spring, 9:30; L.

4. **Advanced Drawing.** Historic periods of architecture, sculpture, and painting. Lectures, with collateral reading and practice in drawing. Fall, 10:30; L.

5. **Advanced Drawing.** A continuation of course 4.
Winter, 10:30; L.

6. **Advanced Drawing.** A continuation of course 5.
Spring, 10:30; L.

7. **The History of Greek Art,** with a consideration of the arts of Egypt, Assyria, and Phoenicia, in their relation to Greek art.
Fall, 8:30; L.

8. **The History of Mediaeval and Modern Art,** with special consideration of the Renaissance period. Winter, 8:30; L.

Mrs. Hubbard

9. **Perspective Drawing.** Elementary study of linear perspective; principles of geometrical forms and familiar objects. Honey's Linear Perspective. Fall, 11:30; L.

10. **Perspective Drawing.** A continuation of course 9. Analysis of principles; development and construction of the arch. Minifie's and Spanton's Perspective. Winter, 11:30; L.

11. **Advanced Perspective Drawing.** A continuation of course 10. Isometric drawing; sciography; perspective applied to buildings, use of plan and perspective erection; applications to sketching and topography. Reference books, Spanton and Ware. Spring, 11:30; L.

12. **Oil Painting.** Color analysis and combinations; painting from still life, fruits, flowers, draperies, etc.; landscape painting; study of the draped model. Hours to be arranged; L.

13. **Pastel Painting.** The various studies of color and design suitable for expression in this medium; special study for pastel portraits and the draped figure. Hours to be arranged; L.

14. **Water Color Painting.** Study from the flat and from nature, still life, landscape or model; design from plant life and conventional; figure and portrait painting. Hours to be arranged; L.

THE SUMMER SCHOOL.

ELEVENTH SESSION, JUNE 21 TO JULY 31, 1909.

THE FACULTY

DANIEL BOARDMAN PURINTON, PH. D., LL. D., *President of the University*

EDWARD HOWARD GRIGGS, A. M., (Formerly Professor of Education and Ethics in Leland Stanford University) *Ethics and English Literature*

J. J. FINDLAY, M. A., PH. D., (Professor of Education in Manchester University, England) *Education*

PERCIVAL CHUBB, (Director of English in the Ethical Culture School, New York City) *English Literature*

MICHAEL VINCENT O'SHEA, B. L., (Head of the Department of Education in the University of Wisconsin) *Education*

WILLIAM M. GIFFIN, A. M., PD. D., (Principal Willard School, Chicago) *Special Methods in teaching Arithmetic and Reading*

CLARA MABEL WHEELER (Horace Mann School, Columbia University) *Primary Department and Observation Classes*

IDA CASSA HEFFRON, (Formerly Instructor in Drawing in the Cook County, Chicago, Normal School) *Public School Drawing, Modeling and Painting*

NEVA AUGUSTA SCOTT, (National Cooking School of Washington, D. C.) *Domestic Arts and Sciences*

JOHN PORTER LAWRENCE, (Director of the Piano Department, National Park Seminary, Washington, D. C.) *Piano and Organ*

ANTON KASPAR, (Concert Master Georgetown Orchestra, Washington, D. C.) *Violin*

JASPER NEWTON DEAHL, A. M., PH. D., (Professor of Education in the University) *Education*

CHARLES EDGAR HOGG, LL. D., (Dean of the College of Law in the University) *Law*

JOHN LEWIS SHELDON, A. M., PH. D., (Professor of Botany and Bacteriology in the University) *Nature Study and Botany*

ALEXANDER REID WHITEHILL, A. M., PH. D., (Professor of Chemistry in the University) *Chemistry*

THOMAS EDWARD HODGES, A. B., A. M., (Professor of Physics in the University) *Physics*

JOHN HARRINGTON COX, PH. B., A. M., (Professor of English Philology in the University) *English Literature*

ALFRED JARRETT HARE, A. B., A. M., (Professor of Latin Language and Literature in the University and Principal of the Preparatory School) *Latin*

JAMES MORTON CALLAHAN, A. M., PH. D., (Professor of American History in the University) *History*

JOHN ARNDT EIESLAND, PH. B., PH. D., (Professor of Mathematics in the University) *Mathematics*

MADISON STATHERS, A. B., PH. D., (Assistant Professor of Romance Languages in the University) *French and Spanish*

ARETAS WILBUR NOLAN, A. B., (Assistant Professor of Horticulture, Forestry, and Economic Entomology in the University) *Elementary Agriculture*

GEORGE PERRY GRIMSLEY, A. M., PH. D., (Assisant State Geologist of West Virginia) *Geology and Physical Geography*

NATHANIEL WILLIS GOODRICH, A. B., B. L. S., (Head Librarian of the University) *Library Science*

DAVID DALE JOHNSON, A. B., A. M., (Instructor in English in the University) *English Language and Composition*

EDWARD RICHTER, LL. D., (Instructor in Voice in the University School of Music) *Voice*

CHARLES J. HOGG, (Instructor in Law in the University) *Law*

URIAH BARNES, (Assistant in Law in the University) *Law*

SUNDAY SCHOOL METHODS FACULTY

JUNE 28 TO JULY 4, 1909.

DANIEL BOARDMAN PURINTON, PH. D., LL. D., *President of the University*

CAMDEN M. COBERN, PH. D., D. D., *Head of the Department of English Bible and Philosophy of Religion in Allegheny College*

JOSEPH CLARK, D. D., *General Secretary of the Ohio Sunday School Association*

ARTHUR T. ARNOLD, *General Secretary of the West Virginia Sunday School Association*

JOHN A. McKAMY, *Presbyterian Publishing House, Nashville, Tennessee*

MRS. MARY FOSTER BRYNER, *Field Worker, International Sunday School Association*

ANNOUNCEMENTS

The Summer School for 1909 will begin June 21 and continue six weeks—until July 31. Students may enter at any time, but they are earnestly advised to be present from the beginning of the school. The Summer School, like any other term of the University, is co-educational in all its courses.

ADMISSION AND CREDIT

There are no requirements for admission to the Summer School unless the student desires University credit for the work to be done. In such case, if he desires to be a special student, he must satisfy his instructors that he is prepared to take the courses selected. If he desires regular classification he must meet the regular University conditions, a statement of which may be found in the University catalogue.

Preparatory or college credit may be had for most of the Summer School work.

Certificates setting forth the work done in the Summer School will be given to those who make application for them to their instructors at the beginning of the term. These certificates are useful to show to members of boards of education and other school officers.

REGISTRATION

Students will register on Monday, June 21, with the Registrar, Room 11, Science Hall. All students, whether previously in attendance at the University or not, must register before entering the Summer School.

Work will begin promptly in all departments on Tuesday, June 22.

FEES FOR THE SUMMER SCHOOL

The entire fee for everything offered in the Summer School (excepting music, the advanced courses in law, and the courses in domestic science) is $2.50, whether the student be a resident of West Virginia or of some other state; provided that if University credit for the work is desired, a matriculation fee of $5.00 must be paid, unless the student is already a matriculate of the University.

Students from states other than West Virginia who desire to obtain University credit for the summer work will also pay the following tuition: In the College of Arts and Sciences, $6.00; in the Preparatory School, $2.50.

If, however, no University credit is desired, the total fee for students from other states as well as from West Virginia will be only $2.50.

The fees in music, in the advanced courses in law, and in domestic science are stated in the announcements of the courses in those subjects.

LIBRARY AND LABORATORIES

The library is open from 8:00 A. M. to 10:00 P. M. every day except Sunday, and on Sunday it is open for reading and the consultation of books from 2:00 P. M. to 5:00 P. M. No books are given out on Sunday.

It is the effort of those in charge to render every possible service to aid students in making profitable use of the books.

The reading room is well supplied with the current periodicals and newspapers—both technical and general—which are free of access to all who wish to make use of them.

The laboratories in chemistry, physics, geology, bacteriology, and botany will be in use during the Summer School.

FREE MUSIC RECITALS AND MATIN SERVICE

Six lecture recitals, under the direction of the School of Music, will be given—one each week. Great composers will be briefly discussed and their works interpreted with voice, piano, violin, or organ by Professor Lawrence, Professor Kaspar, and Professor Richter. These delightful recitals, given every summer, constitute one of the most enjoyable features of the Summer School. They are free to students and the public.

A brief chapel service will precede these music recitals. They will be held every Wednesday at 11 o'clock in Commencement Hall. During that hour no other exercises will be held in any department of the Summer School.

LIVING ACCOMMODATIONS

Woman's Hall

Miss Susan Maxwell Moore, Dean of Women, will be in charge of Woman's Hall as usual. Write to Miss Moore for information as to rates, and as to engagement of rooms.

Chapter Houses for Young Women

Co-operative living among young women students at the University has been found to be so satisfactory and so cheap that two

Chapter Houses—the Sigma Chi and the Phi Sigma Kappa—will be used for this purpose during the summer. Miss Georgia Lee Staats will have charge of the former and Miss Mahala D. Prichard of the latter, but the Dean of Women will have general control. Both of these Chapter houses stand at the edge of the University campus. One of them will accommodate seventeen and the other fourteen young ladies.

To obtain information and to engage rooms write to Miss Staats or Miss Prichard at Morgantown.

Other Places

Most of the rooming and boarding places in town are open during the summer at reasonable rates. The two Christian Associations of the University have charge of the work of helping students to find suitable accommodations. Committees of these associations will meet students at the railway station or at the wharf and conduct them to their rooms. Letters of inquiry about rooming and boarding addressed to the President's office at the University will be put into the proper hands.

EDUCATIONAL CONFERENCE

The seventh annual two days' Educational Conference, under the auspices of the University Summer School, will be held Friday and Saturday, June 25 and 26, in Commencement Hall. The topic this year will be "Professional and Vocational Schools for West Virginia."

All persons interested in this topic are cordially invited to be present and take part in the discussions. These educational conferences have proved to be of great importance in their relation to West Virginia educational questions. Dr. Edward Howard Griggs, of New Jersey, will deliver two lectures during the conference and take part in the discussions.

SUMMER SCHOOL CONVOCATION

The convocation exercises of the Summer School will be held Monday evening, June 21, at 8:30 o'clock, in Commencement Hall. The convocation address will be delivered by Dr. Edward Howard Griggs, formerly of Leland Stanford University. His subject will be "Self-culture Through the Vocation." Music will be furnished by the School of Music.

SCHEDULE OF COURSES BY HOURS

8:00 A. M.

Literature in the grades—John H. Cox.....21 W.
Fundamentals of English grammar—D. D. Johnson.....13 M.
Development of modern Europe—J. M. Callahan..... 3 M.
Botany—John L. Sheldon.....12 S.
Agricultural education—A. W. Nolan.....25 M.
Elementary general physics—Thomas E. Hodges.....11 S.
Latin—Caesar—A. J. Hare.....11 M.
French—Practical course—Madison Stathers.....11 W.
Algebra—John A. Eiesland.....16 W.
Public school drawing—Ida C. Heffron.....14 W.
Law—Pleading and practice—C. E. Hogg.....27 W.
Law—Persons and domestic relations—C. J. Hogg.....28 W.

9:00 A. M.

Theory and practice of teaching—J. N. Deahl.....12 M.
Shakespeare—John H. Cox.....21 W.
College composition—D. D. Johnson.....13 W.
American social and economic history—J. M. Callahan..... 4 M.
Elementary Agriculture—A. W. Nolan .....25 M.
Latin—Elementary Course—A. J. Hare.....11 M.
French—Elementary Course—Madison Stathers.....11 W.
Plane Trigonometry—John A. Eiesland.....16 W.
Law—Criminal law—Uriah Barnes.....26 W.
Language and reading; school management—W. M. Giffin.....14 M.

10:00 A. M.

English poets of the nineteenth century—John H. Cox.....21 W.
Preparatory composition—D. D. Johnson.....13 W.
The United States as a world power—J. M. Callahan..... 4 M.
Nature study—John L. Sheldon.....12 S.
Elementary agriculture—A. W. Nolan.....25 M.
General chemistry—A. R. Whitehill.....20 S.
Latin—Syntax—A. J. Hare.....11 M.
French—Fiction of the nineteenth century—Madison Stathers...11 W.
Plane geometry—John A. Eiesland.....16 W.
Law—Evidence—C. E. Hogg.....27 W.
Law—Criminal procedure—Uriah Barnes.....26 W.

11:00 A. M.

Child study—J. N. Deahl.....12 M.
Special historical conference—J. M. Callahan..... 4 M.

Nature study—John L. Sheldon.....12 S.
Latin—Horace—A. J. Hare.....11 M.
Spanish—Elementary course—Madison Stathers.....11 W.
Law—Agency—Uriah Barnes.....26 W.

8:30 to 11:30 A. M.

Observation classes—Clara M. Wheeler.....10 M.

1:30 P. M.

Experimental physics—Thomas E. Hodges.....14 S.
Electrical measurements—Thomas E. Hodges.....14 S.
Experimental chemistry—A. R. Whitehill.....22 S.
Qualitative analysis—A. R. Whitehill.....22 S.
Elementary qualitative analysis—A. R. Whitehill.....22 S.

2:00 P. M.

Administration and supervision of schools—J. N. Deahl.....12 M.
Law—Real property—C. J. Hogg.....28 W.
Pedagogy of arithmetic—W. M. Giffin.....14 M.

3:00 P. M.

Lectures by E. H. Griggs, J. J. Findlay, Percival Chubb, and
M. V. O'Shea.....14 M.

4:00 P. M.

Geology and physical geography—G. P. Grimsley..... L.
Public school drawing—Ida C. Heffron.....14 W.
Public school music—Edward Richter.....19 W.
Field work in botany and nature study—John L. Sheldon.....
Field and garden work in agriculture—A. W. Nolan.....

Hours To Be Arranged

District supervision—J. N. Deahl.....12 M.
Analysis of coal, coke, and water—A. R. Whitehill.....22 S.
Qualitative analysis—A. R. Whitehill.....22 S.
Drawing—Advanced work—Ida C. Heffron.....14 W.
Domestic arts and sciences—Neva A. Scott.....15 M.H.

8:30 P. M.

Lectures by E. H. Griggs, J. J. Findlay, Percival Chubb, and
M. V. O'Shea..... C.

COURSES OF INSTRUCTION

All Courses Extend Throughout the Entire Six Weeks, Unless Otherwise Stated.

The abbreviations are: M., Martin Hall; W., Woodburn Hall; S., Science Hall; L., Library; C., Commencement Hall; E., Experiment Station; N. F., North Fife.

The numbered courses are taken from the regular University catalogue; the lettered courses are special Summer School courses.

EDUCATION

J. J. FINDLAY

During the week beginning July 12, Dr. J. J. Findlay, Professor of Education in the University of Manchester, England, will lecture on "The Corporate Life of the School." He will discuss the following topics:

1. The function of schooling—a discussion of first principles.
2. Grouping of scholars for the purpose of social experience.
3. Civics and patriotism.
4. Rewards and punishments.
5. Parent, teacher, and school.

July 12 to July 17, 3:00 P. M.; 14 M.

Professor Findlay will also give two evening lectures as follows:

1. Arnold of Rugby.
2. The training of teachers and the study of education (treated as a matter of large public interest).

Tuesday and Thursday, 8:30 P. M.; C.
Conference daily except Wednesday, 11:00 A. M.; 14 M.

M. V. O'SHEA

During the week of July 19 to 23, Dr. M. V. O'Shea, head of the Department of Education in the University of Wisconsin, will deliver five lectures chosen from the following general subjects. The topics he will discuss will depend upon the interests of his audience:

1. The social development and training of childhood and youth.
2. Dynamic education.
3. Everyday problems in modern education.
4. The psychology of skill and its acquisition in the school-room.
5. What learning means and the methods of learning in the school-room.

July 19 to 23, 3:00 P. M.; 14 M.

Professor O'Shea will give the following course of evening lectures during this week:

1. A danger in American life.
2. The passions of childhood and youth.
3. The child as heir of the ages.

Tuesday, Thursday, and Friday, 8:30 P. M.; C.
Conference daily except Wednesday, 11 A. M.; 14 M.

WILLIAM M. GIFFIN

Dr. William M. Giffin, principal of the Willard School, Chicago, will give three courses a day in the Summer School for the two weeks beginning July 5 and ending July 15. His subjects will be "Language and Reading Lessons," "The Pedagogy of Arithmetic," and "School Management."

The Pedagogy of Arithmetic. An arithmetic creed; lines inspection; lines construction; grammar school geometry; trea; volume; bulk; time; weight; values; single things; percentage (class exercise if possible); interest; fundamental operations, importance of right methods in teaching same; arithmetic with figures; arithmetic without figures. July 5 to July 16, 2:00 P. M.; 14 M.

Language and Reading Lessons. A plea for the 90 per cent who never reach the eighth grade; the value of the comma in reading; the abuse of the comma in reading; oral work; written work; the sentence; pronouns, their use and abuse; big little words; work for the first grade; the second grade; the third grade; the fourth grade; the fifth grade; the sixth grade; the use of lists of words in written exercises; use of pictures. July 5 to July 9, 9:00 A. M.; 14 M.

School Management. During the second week of his engagement Dr. Giffin will give one talk each day on school management under the following general subjects: First duty of a teacher after securing an appointment; health of teacher and her pupils; discipline, how to secure such as is desirable; teaching, hints of things to do and things not to do; importance of proper training of the will; the teachers' alphabet; when and how to use a method; the principal and his relations to his assistants; assistants and their relations to the school and principal; the teacher's "kit," or what every teacher should have.

These talks are based on "School Days in the Fifties," recently published. July 12 to July 16, 9:00 A. M.; 14 M.

JASPER NEWTON DEAHL

A. Theory and Practice of Teaching and School-room Management. Required reading, recitations, discussions, observation of les-

sons, reports and practice work. This course will aim to present some of the principles of the learning process, and their application. The observation classes will be used for observation and practice teaching. One-half course credit. 9:00 A. M.; 12 M.

B. Child Study. Required reading, recitations, discussions, observations, and conferences. This course will deal with the physical and mental development of children. It will aim to present some of the facts of child life as to physical growth, motor development, the instincts and their development, mental and moral development, etc., and to interpret these facts from the standpoint of the learner and teacher. One-half course credit. 11:00 A. M.; 12 M.

6. Administration and Supervision of Schools. This is the second half of Education 6; it was offered in the Summer School of 1905. It will embrace the study of the following topics:

1. The functions of school boards and the business administration of schools.
2. School furniture and school architecture.
3. The school superintendent—his preparation and duties.
4. County supervision and district supervision.
5. Classification of pupils and study period.
6. The slow and delinquent children in school.
7. Statistics and reports in school supervision.
8. The program of studies and the grading of the school.
9. The daily program, etc.

One-half course credit. 2:00 P. M.; 12 M.

6. (a) District Supervision. (b) Program Making. Individual and class work will be offered in each of the above named topics, district supervision and program making, for a part of the term or for the entire six weeks, as there may be need of such work.

Hours to be arranged; 12 M.

PRIMARY WORK AND METHODS

CLARA M. WHEELER

The classes for observation will be in charge of Miss Clara M. Wheeler, of the Horace Mann School, Teachers' College, Columbia University. They will consist of pupils beginning the work of the first, the third, and the sixth years, and the course of instruction will include the various subjects taught pupils of these grades. Emphasis will be placed upon available sources of first-hand knowledge, gained through observation and experiments, the relation of this work to

text-book study, and to the various modes of expression, including various forms of construction. In nature study and in geography, field work will be done. Students taking education with Professor Deahl will have the privilege of doing some practice teaching with these classes of pupils.

The recitation periods of the classes for observation will not exceed thirty minutes. Students taking the observation work can, therefore, adapt it to their courses in other subjects so as not to interfere with either.

A. Class of First and Third Year Pupils.
8:30 to 10:00 A. M.; 10 M.

B. Classes of Sixth Year Pupils. 10:00 to 11:30 A. M.; 10 M.

C. Conferences. Miss Wheeler will meet the observers for a number of conferences upon the work illustrated with the classes of children. Topics for these conferences will be as follows: The aim of the work; the educative value of subject matter found in nature study, geography, history, and literature; the relation of thought to form in teaching language, reading, numbers, and modes of expression; the preparation of a lesson; the recitation; the study period and seat work; training and discipline. Hours to be arranged; 10 M.

Two periods a day should be the maximum time spent in observation work. Every student in the Summer School should do some regular, systematic class work, academic or professional, or both. Those who observe but do no class work should, at least, devote a part of their time to systematic reading in the library on the subjects of their observation work. Students desiring certificates for observation work will be required to do some reading and reporting on the lessons observed.

ENGLISH LITERATURE

EDWARD HOWARD GRIGGS

During the first week of the Summer School—June 21 to 25—Dr. Edward Howard Griggs will give a course of five lectures as follows, on

Dante

1. The mediaeval world and the life of Dante.
2. The problem of the *Divine Comedy*.
3. The *Inferno*.
4. The *Purgatorio*.
5. The *Paradiso*. June 21 to 25, 3:00 P. M.; 14 M.

Great Moral Leaders

During the same week Dr. Griggs will give a course of evening lectures on "Great Moral Leaders," as follows:

1. Socrates.
2. St. Francis of Assisi.
3. Savonarola. June 22 to 24, 8:30 P. M.; C.

Dr. Griggs will give the Summer School Convocation address June 21, 8:30 P. M.; C.

Conference daily except Wednesday, 11:00 A. M.; 14 M.

PERCIVAL CHUBB

From July 5 to 9, Percival Chubb, of New York city, will give a course consisting of the following lectures on

The Study and the Teaching of English

1. The nature of the child as a literary and linguistic personage.
2. The nature of literature, and how to teach it.
3. Reading, and what and how to read.
4. Expression, oral and written, and what and how to express.
5. The great literary types and the chief literary values to be drawn from them.

July 5 to 9, 3:00 P. M.; 14 M.

This course will be supplemented by an evening course of five lectures, which will be largely illustrative and interpretative, as follows:

1. The genius of English poetry, with illustrative interpretations.
2. The folk-element in literature, with illustrations from the ballads, old and new.
3. Our story-tellers, Irving and Hawthorne, and the art of the short story.
4. The story in verse as illustrated in the narrative poem and the epic.
5. Shakespeare and the study of the drama.

July 5 to 9, 8:30 P. M.; C.

Conference daily except Wednesday, 11:00 A. M.; 14 M.

JOHN HARRINGTON COX

58. **Literature in the Grades.** A course primarily for teachers, but open to other students in the University. It deals with the principles of literary criticism; application of tests; the science and art of story-telling; general and special methods of presentation; the tributaries of the literary stream; course of study; bibliography. One-half course credit. 8:00 A. M.; 21 W.

39. **Shakespeare.** The aim of this course is to develop the power to read Shakespeare with intelligent appreciation. A small number of plays will be studied carefully with special attention to exact interpretation and to those peculiarities of language in which Shakespearean usage differs from our own. One-half course credit. 9:00 A. M.; 21 W.

A. **English Poets of the Nineteenth Century.** The course will deal with the relation of literature to life; the rise of the romantic school; the new view of nature in Wordsworth; the form and content of the sonnet; the philosophy of life in Tennyson and Browning; the sensuous beauty of Keats; the ideality of Shelley; other authors as time may permit. One-half course credit. 10:30 A. M.; 21 W.

DAVID DALE JOHNSON

B. **Composition (Preparatory).** This course is designed to afford practical training in composition adapted as far as possible to the individual needs of each student. Recitations, lectures, and individual conferences. Students who desire to work for credit should consult the instructor before registering. One-half course credit. 10:00 A. M.; 13 W.

C. **The Fundamentals of English Grammar.** An outline study of English grammar with special reference to the structure of the sentence. No credit. 8:00 A. M.; 13 W.

10. **Composition (College).** Study of brief text-book; daily themes prepared and presented; class composition; daily criticism and discussion of written exercises. One-half course credit. 9:00 A. M.; 13 W.

HISTORY

James Morton Callahan

Three regular credit courses are offered and a period is arranged for daily informal conferences.

14. **Development of Modern Europe.** A course especially designed to enable students to "keep up" with the times by enabling them to read and interpret intelligently the foreign news in the morning papers and in the magazines. It includes a succinct, well connected account of the significant movements and ideas which constitute the framework of the history of Europe (including England) in the eighteenth and nineteenth centuries, emphasizing the social and economic elements of history, and subordinating the importance of the past to that of the present without any distortion of facts. Some time is given to biographies of great leaders, and much attention is given to selected problems in nineteenth century history. One-half course credit. 8:00 A. M.; 3 M.

29. **American Social and Economic History.** The story of the economic achievements of a virile people whose westward expansion, and other changing conditions of environment, constantly compelled new social and industrial adaptations and promoted ingenuity and energy of character. The study forms a historical basis that is essential to a thorough understanding of political history and the study of economics. Beginning with the exploration and settlement that led to English colonization, the student traces the growth and expansion of manufactures, agriculture, commerce, transportation, population, and labor from the simple agricultural communities of the English colonies to the complex industrial and commercial organization of to-day. He learns how to acquire the information which is a necessary preliminary for the solution of present day industrial, financial, and commercial problems. One-half course credit.
9:00 A. M.; 4 M.

26. **The United States as a World Power; Its Development and Its Problems.** A study of the relations of the United States to the great drama of world politics, the fundamental principles of American foreign policy, and America's influence in international law and diplomacy, as determined or affected by circumstances of geography, national character, tradition, economic and social conditions, and historical development from 1776 to 1909, and as reflected in international negotiations, treaties, conventions, conferences and arbitrations to which the United States has been a party. The entire study

is developed from the standpoint of the living problems of the present. For mature students who are familiar with the outlines of American history. One-half course credit. 10:00 A. M.; 4 W.

Special Historical Conference. Students in the regular history classes, and teachers attending other classes in the Summer School, are given an opportunity for a daily conference for the consideration of special topics in connection with regular class work, consultation in regard to investigations in state and local history, the discussion of the proper materials, tools and methods of historical study and instruction, and the inspection of text-books, maps and various pedagogical aids and devices necessary or useful for properly equipped teachers of history and civics in the secondary schools. A lecture, open to all who wish to attend, is given every Monday.

11:00 A. M. (or at some other hour by special appointment), 4 M. and Library.

BOTANY AND NATURE STUDY

JOHN LEWIS SHELDON

A. Botany. The work offered in this course will include a study of some of the common plants growing in West Virginia, such as pond-scums, bacteria, yeasts, molds, mildews, rusts, smuts, mushrooms, liverworts, mosses, ferns, conifers, grasses, sedges, and other seed plants. Special emphasis will be given to those of importance in their relation to agriculture, fruit growing, and forestry. Students will collect many of the plants for study. One course credit.

Class or laboratory work, 8:00-10:00 A. M. daily; field or laboratory work, 4 P. M., Monday, Wednesday, Friday; 12 S.

B. Nature Study. A practical course for those who wish to become better acquainted with some of the beneficial as well as harmful organisms known as "germs" or "microbes." Lectures with demonstrations, recitations, and laboratory work. Conn's "Bacteria, Yeasts, and Molds in the Home" will be used as a text. One-half course credit. 10:00 A. M.; 12 S.

C. Nature Study. This course in nature study will be arranged for those who expect to teach nature study and elementary agriculture in the public schools. A portion of the time will be used for informal talks on methods of presenting the subject, but more emphasis will be given to a study of objects at first hand, either in the class-room or field, than to a study about objects. One-half course credit.

Class work, 11:00 A. M. daily, except Wednesday; field or laboratory work, 4:00 P. M., Tuesday, Thursday; 12 S.

A strong pocket knife and a hand lens will be found useful for field work in botany and nature study.

The following and similar texts are recommended for reference:

Bergen: Foundations of Botany.
Bergen and Davis: Principles of Botany.
Coulter: Plant Studies; A Text-Book of Botany.
Hodge: Nature Study and Life.
Holtz: Nature Study.
Cummings: Nature Study.

ELEMENTARY AGRICULTURE

ARETAS W. NOLAN

A. Elementary Agriculture. A course for teachers of the public schools. Agricultural nature study, and intensive studies in the principal topics of agriculture; soils and fertilizers; the plant and its environment; vegetable and fruit culture; elements of forestry; insects, their injury and treatment; domestic animals of the farm; rural economics, etc.

The main emphasis in this course will be placed upon the scientific facts and principles which underlie the processes of agriculture. with references, as the class may demand, to the selection of subject matter and methods in teaching agriculture and nature study in the public schools. This course is a continuation of Course E, given last summer. One-half course credit.

Lectures, text-book, laboratory, field and school garden work, 9.00 A. M.; field and garden work, Monday and Wednesday, 4:00 P. M.; 25-27 M.

B. Elementary Agriculture. Same as Course A, described above. A second section for students who are unable to enroll for the 9:00 A. M. hour. 10:00 A. M.; field and garden work, Tuesday and Thursday, 4:00 P. M.; 25-27 M.

C. Agricultural Education and Industrial Evolution. A course given to a consideration of the educational problems which are vitally connected with the social and industrial progress of the people of the United States. The evolution of industries and the growth of agriculture as a determining factor in modern educational practices. The rural school and the education of the farmer's family. A course for school superintendents, principals, and others interested in the large questions of industrial education.

Lectures, text-books, and conferences. One-half course credit. 8:00 A. M.; 25-27 M.

PHYSICS

THOMAS EDWARD HODGES

A. Elementary General Physics. Lectures and demonstrations. Selected topics intended primarily for teachers of physics in secondary schools. The selection of topics will be determined by the needs of the class. One-half course credit. 8:00 A. M.; 11 S.

4. Experimental Physics. A laboratory course consisting of strictly quantitative experiments. At least two consecutive hours each day will be given to the work. One-half course credit.
1:30 P. M.; 14 S.

12. Electrical Measurements. Advanced laboratory work. The use of measuring instruments of precision, sensitive galvano-meters, apparatus for accurate measurements of resistent, current, electromotive force, induction, magnetic properties of iron, etc.
1:30 P. M.; 14 S.

Students desiring other work than that outlined in the foregoing courses will be accommodated if the time of the instructor will permit.

CHEMISTRY

ALEXANDER R. WHITEHILL

A. General Chemistry. This course is designed for beginners and serves as a general introduction to chemical study. It is general rather than technical in its nature. It includes the study of some of the more important elements, and special attention is directed to the application of chemistry to agriculture, botany, geology, and other scientific branches of study. The course is especially adapted to the needs of science and nature study teachers. Instruction is given by lectures which are fully illustrated by experiments. One-half course credit. 10:00 A. M.; 20 S.

B. Experimental Chemistry. A laboratory course in general chemistry, in which the preparation and a study of the properties of the more important chemical compounds will be undertaken.
1:30 P. M.; 22 S.

4. Qualitative Analysis. A laboratory course treating of the separation and detection of the more common elements.
1:30 P. M.; 22 S.

6. **Elementary Quantitative Analysis.** This course includes a small number of simple gravimetric, volumetric, and electrolytic determinations, together with the study of the operations involved.
1:30 P. M.; 22 S.

7. **Analysis of Coal, Coke, and Water.** This is a course designed especially for engineering students, but open to others who have the necessary preliminary training. Hours to be arranged; 22 S.

9. **Quantitative Analysis.** Students registering for this course will be assigned such work as they are prepared to do.
Hours to be arranged; 22 S.

NOTE:—The work in chemistry will be adjusted as far as possible, to meet the individual needs of the students, and credit will be given in proportion to the amount of work done.

GEOLOGY AND PHYSICAL GEOGRAPHY

GEORGE PERRY GRIMSLEY

During the four weeks beginning July 5, Dr. George Perry Grimsley, Assistant State Geologist of West Virginia, will give the following series of twelve lectures, three each week:

1. The life of the past—a study in geological formations.
2. The geological evolution of the North American continent.
3. The geological history of West Virginia.
4. The autobiography of river and hill.
5. Limestones and lime in West Virginia.
6. Clays and their products.
7. The cement age and its application to West Virginia.
8. Coal and its development.
9. Forty years of petroleum.
10. Liquid and gaseous fuel.
11. Natural Palimpsests, or the story of the rocks.
12. The buried treasures of a mountain state, or the mineral wealth of West Virginia.

July 5-Aug. 1, Monday, Wednesday, Friday, 4:00 P. M.; L.

LATIN

ALFRED JARRETT HARE

1. **Elementary Course.** This course is for beginners and those who wish to review. The work will cover pronunciation, the declensions and the conjugations, with easy translations to illustrate the principles of grammar presented in the text-book. One-half course credit. 9:00 A. M. ; 11 M.

3. **Syntax.** The infinitive, the subjunctive, the gerundive, the supines, and indirect discourse. Each of these subjects is illustrated by isolated sentences in both Latin and English, and in connected discourse in the form of an epitome of the Helvetian war. One-half course credit. 10:00 A. M.; 11 M.

4. **Caesar.** For teachers and those who desire credit for Course 4 in the preparatory school. The part read will be the first book of the Gallic war, and especial attention will be paid to indirect discourse and other grammatical constructions and idioms. One-half course credit. 8:00 A. M.; 11 M.

11. **Horace.** The Odes, Books I and II, and the Carmen Saeculare will be translated. The work will include literal and free translations, grammatical constructions, and the historical, biographical, and mythological allusions of the text read. One-half course credit. 11:00 A. M.; 11 M.

FRENCH

MADISON STATHERS

A. **Practical French.** The aim of this course is the practical application of the French language in composition and conversation. Translation is limited to collateral reading. Careful attention is given to forms and pronunciation. Open to students who have had from one to three years in French. 8:00 A. M.; 11 W.

1. **Elementary Course.** Grammar, reading, and composition. Stress is laid on the pronoun and the conjugation of the verb. Constant practice in pronunciation and oral understanding. Fraser and Squair's French Grammar; Aldrich's and Foster's French Reader. 9:00 A. M.; 11 W.

4. **Fiction of the Nineteenth Century.** Reading in class of Balzac's Contes, Merimee's Colombo and George Sand's La Petite Fadette. Reading outside of class of one or two works of the same period. Composition once a week. 10:00 A. M.; 11 W.

NOTE:—Demands for other courses in French will be met as far as possible.

SPANISH

MADISON STATHERS

1. **Elementary Course.** Grammar and Reading, with practice in pronunciation, composition, and oral understanding. Loiseaux' Elementary Spanish Grammar and Ramsey's Elementary Spanish Reader. 11:00 A. M.; 11 W.

MATHEMATICS

JOHN ARNDT EIESLAND

3. **Algebra.** Review up to quadratic equations. Quadratic equations and graphical algebra. 8:00 A. M.; 16 W.

5. **Plane Geometry.** Review course. Exercises in algebraic geometry. 10:00 A. M.; 16 W.

9. **Plane Trigonometry.** Development of formulae; solution of trigonometrical equations; anti-trigonometrical functions; practical exercises and problems. 9:00 A. M.; 16 W.

NOTE:—Courses other than those announced above will be given if the time of the instructor permits. An effort will be made to give whatever is called for.

PUBLIC SCHOOL DRAWING, MODELING, AND PAINTING

IDA C. HEFFRON

Drawing. Nature study drawing, landscape, sketching, rapid sketching on blackboard, geographic drawing, chalk modeling of maps, drawing of the human figure. The mediums used will be crayon, charcoal, pencil, and pen and ink.

Painting. Nature study, painting of forms and tints of plants and animal life, fruits and flowers. Out-of-door sketching of landscapes, including the human figure. Invention and design applied to ornamentation for the school room and home. The making and use of stencils. Watercolors will be the medium used.

Clay Modeling. Nature study, modeling of forms of plants, fruits, and animals. History and literature aids, as making typical houses, dishes, statuettes of historical character. Sand and putty modeling of maps and surface vs. geographical forms. Hints on coloring the

clay, on glazes, and on firing the clay. Making of plaster moulds and casts.

A. **First Section.** 8:00 A. M.; 14 W.

B. **Second Section.** 4:00 P. M.; 14 W.

C. **Advanced Work in Special Subject.** Hours to be arranged; 14 W.

D. **Round-table or Conference.** Periods for discussion of the individual needs of the students. Hours to be arranged; 14 W.

LIBRARY SCIENCE

NATHANIEL L. GOODRICH

A. **Apprentice Course.** This is designed to help persons who have charge of small school or town libraries. Students will be assigned in rotation to work in the different departments of the library, ordering, accession, classification, cataloguing, shelf-listing, circulation, etc. Principles and methods will be explained and the work criticised.

B. **School Libraries.** Through the courtesy of the publishers the Library has obtained a collection of books suitable for school libraries, which will be on exhibition. The librarian will give suggestions regarding the choice, purchase and use of school libraries to any who are interested. One or two lectures on this subject will be given if it seems advisable.

DOMESTIC ARTS AND SCIENCES

NEVA AUGUSTA SCOTT

Domestic Science

I. **Ideas for Entertaining.** Invitations, menus; table decoration and service, and novel schemes for special occasions.

II. A. **Chafing Dish Dainties.** Made with cheese; left-over meats; eggs, and lobster.

B. Sandwiches, meat; vegetable; and sweet.

III. A. **Beverages.** New punches, liquid and frozen.

B. **Candy making.** Without cooking; cooked sweets.

IV. A. **Salads.** Vegetable; meat; fruit; and molded salads.

B. **Dressings.** Without oil; French; and Mayonnaise.

V. **Cold Dishes,** suitable for suppers or Sunday night tea.

VI. **Frozen Dishes.** Ices; sherbets; American creams; and creams.

VII. A. **Cakes.** Large and small.

B. Icings. Cooked; uncooked; caterers' decorations with and without patterns.

VIII. Bread. Yeast, loaves and fancy rolls; tea and sweet rolls.

IX. Light Breads. Brown-bread; biscuits; muffins; and corn-bread.

X. Soups. With stock; without stock; thick and thin.

XI. Novel Vegetable Dishes. Turbans; croustades; purees; asparagus loaf.

XII. Boning of Fish and Fowls.

Domestic Arts

Short courses in millinery, sewing, and raffia work will be arranged to fit the needs of the students.

Fee for course of six weeks, $10.00; for course of 10 demonstrations, $3.00.

The demonstrations will be in room 15, Mechanical Hall. Hours to be arranged.

LAW

CHARLES EDGAR HOGG

If a sufficient number of students are obtained to justify it, the following courses in advanced work in law will be given:

A. Pleading and Practice at Law and in Equity. The proper parties to actions and suits, requisites and essential allegations of declarations and bills, defenses at law and in equity, and trial procedure. 8:00 A. M.; 27 W.

B. Evidence. Embodying the general rules, their application to specific cases, and the admissibility of evidence under the pleadings. Also, Outlines of Corporation Law. 10:00 A. M.; 27 W.

Fee for both of these courses, $40.00; no fees for the other law courses.

C. J. HOGG

1. Persons and Domestic Relations. Elementary law; nature of laws in general; construction of statutes; relative and absolute rights; essentials of valid marriage; rights and disabilities of husband and wife; antenuptial and post-nuptial settlements; separation and divorce; legitimacy of children and legitimation of bastards; rights and duties of parents and children; guardian and ward; infants, insane persons and aliens; master and servant. 8:00 A. M.; 28 W.

2. **Real Property.** Concise course in the principles of real property, including the nature of real property; feudal system of tenures and their relation to our modern land tenures; fixtures; study of the different classes of estates; including dower, courtesy, joint tenants, reversioners, remaindermen; and partition and manner of making.

2:30 A. M.; 28 W.

URIAH BARNES

11. **Criminal Law.** Definition, nature and punishment of crime; how the criminal law is prescribed; classification of crimes; the mental element in crime; persons capable of committing crime, and exemptions from responsibility; ignorance of law and fact; principles and accessories; liability of principal and agent; overt acts, attempts, solicitations, and conspiracy; offenses against the person; against the habitation; against property; against public health, safety, comfort, and morals; against public justice and authority; against the public peace; against the government; against the law of nations; statutory offenses; jurisdiction; venue; former jeopardy.

9:00 A. M.; 26 W.

12. **Criminal Procedure.** Apprehension of persons and property—arrest, extradition, searches and seizures; preliminary examination, bail, commitment, and summary trial; limitations of prosecutions; modes of accusation; the grand jury; the rules of pleading with reference to indictments, informations and complaints, illustrated by proper forms and established precedents; issues, proof and variance; motion to quash, and demurrer; arraignment and pleas of defendant; the petit jury; trial and verdict; motions for new trial and in arrest of judgment; judgment, sentence, final commitment, and punishment; writ of error; habeas corpus; evidence in criminal cases.

10:00 A. M.; 26 W.

7. **Agency.** Creation of the relation of principal and agent—appointment, ratification, estoppel, and agency from necessity; what acts can be done by an agent; capacity of parties; performance of the agent's powers and the delegation thereof; termination of the relation; construction of authority; rights and liabilities between principal and third persons; rights and liabilities between agent and third persons; rights and liabilities between principal and agent, special phases of agency, and particularly of attorney and client.

11:00 A. M.; 26 W.

THE SCHOOL OF MUSIC

JOHN PORTER LAWRENCE

Instructor on the Piano and Organ

Director of the Piano Department in the National Park Seminary; Organist of the New York Avenue Presbyterian Church, Washington, D. C.; Representative of Washington at the Buffalo Pan-American Exposition Concerts. He has had extensive experience in teaching; studied for four years at Leipzig, Germany, where he took the Helbig prize.

EDWARD RICHTER

Instructor in Voice Culture and Public School Music

Member of the School of Music Faculty.

ANTON KASPAR

Instructor on Violin

Concert Master of the Georgetown Orchestra, Washington, D. C. A Bohemian by birth; studied in Prague under the renowned Master Bonnewitz, teacher of the great violinist, Kocain. Later he studied under Malo and Remy, two of the most celebrated violinists in Paris.

Historical Lecture Recitals

Six of these recitals will be given during the Summer School, when the faculty will give lectures and programs, taking a great composer for each recital. These recitals will be given conjointly by the faculty and will be free.

RATES OF TUITION

Piano

JOHN PORTER LAWRENCE

Six weeks' course, three private lessons a week.....$30.00
(30 minutes each)

Organ

JOHN PORTER LAWRENCE

Six weeks' course, three private lessons a week.....$25.00
(30 minutes each)

Voice

EDWARD RICHTER

Six weeks' course, three private lessons a week.....$25.00
(30 minutes each)

Violin

ANTON KASPAR

Six weeks' course, three private lessons a week.....$25.00
(30 minutes each)

Mandolin, Guitar, and Banjo

ANTON KASPAR

Six weeks' course, three private lessons a week.....$15.00
(30 minutes each)

Pianos for Practice

One hour per day for six weeks, $2.50.
Two hours per day for six weeks, $4.00.
Three hours per day for six weeks, $5.00.
Clavier practice for six weeks, one hour per day, $1.00.
Organ practice twice the cost of piano practice.

All tuition and other fees are payable in advance. Sheet music provided for the cost of handling. Students can enter at any time; a slight reduction will be made for the time not taken in the full course.

PUBLIC SCHOOL MUSIC TRAINING CLASS

EDWARD RICHTER

A class in the study of elementary vocal music and sight singing will be held. The work will be divided into two parts. One consists of the training of the class in the intervals, scales, and principal chords, to give as thorough an elementary foundation in theory of music as possible in the term.

Time, time names, sol fa-ing and singing from the staff will receive equal consideration.

The other is a study of methods in public schools.

The first mentioned work will enable members of the class to read music with moderate proficiency, and the other will give them a reasonable mastery of the methods pursued by the most skillful teachers of singing in the public schools of this country—methods that make the singing lesson in the schools both pleasant and profitable. Monday, Tuesday, Thursday, 4:00 P. M.; 19 W.

Fee for this course, $2.50.

SCHOOL OF METHODS FOR SUNDAY SCHOOL WORKERS

The sixth session of the School of Methods for Sunday School Workers will be held at West Virginia University from June 28 to July 4, 1909. As usual, it will be held in connection with the University Summer School, but neither interferes with the other; indeed, each is of great benefit to the other.

No tuition fee is charged. A registration fee of one dollar is charged, but students registered in the regular Summer School are not required to pay even this nominal fee.

The purpose of the School of Methods is to give pastors, Sunday School superintendents, and teachers an opportunity to be instructed in the most modern principles and methods of Sunday School work by some of the leading Sunday School workers of America.

International Recognition

The International Department of Education will grant certificates to students according to the following standard:

A. Attendance of the student for at least 15 hours of the work.

B. Recommendation by the management of the school, based upon approval of note-books, or such other examination as they may require.

Attendance at the study hour will have weight with the management of the school in recommending students for recognition.

Program

The detailed program is published in a separate pamphlet which may be had for the asking. The week will be filled with instruction of great practical value to all Sunday School superintendents, teachers, and others engaged in Sunday School work. For program of School of Methods for Sunday School Workers write to President Purinton, Morgantown, W. Va., or Arthur T. Arnold, General Secretary, West Virginia Sunday School Association, Wheeling, W. Va.

THE COMMERCIAL SCHOOL

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

DENNIS MARTIN WILLIS, A.B., LL.M., *Principal*

FRANCIS WILLARD STEELE, *Instructor in Stenography and Typewriting*

SIMEON CONANT SMITH, A.M., *Instructor in English*

DAVID DALE JOHNSON, A.M., *Instructor in English*

Note:—The University classes in history, economics, geology, and commercial law are open to students in the Commercial School.

AIM AND SCOPE

The purpose of this school is to meet the increasing demand of the business world for efficient young men, to take the middle places in the control of large business institutions,—as managers, superintendents, heads of departments, and private secretaries,—of whom a certain initiative is demanded, and on whom is placed a certain amount of responsibility. It aims to prepare young men to start in business with the advantages of a trained mind and a scientific knowledge of modern business methods and conditions.

Courses of instruction are offered in subjects which are of special importance in preparing young men for business careers—particularly, such careers as arise in connection with transportation, insurance, banking, etc. An effort has been made in the arrangement of the curriculum to combine, as far as possible in the space of two years, a generous amount of the broad general culture of the college course, with a knowledge of economic laws in relation to the various departments of trade, commercial and industrial organization, accounting, etc. Instruction in the Commercial School is given in connection with the work done by the professors in the other departments of the University.

FEES

Tuition is free to West Virginia students. To students from other states, tuition in the Commercial School is $5.00 per quarter.

The matriculation fee is $5.00, payable by all students upon entering the University. Unless a student remains out of the school for more than three years the matriculation fee is paid but once.

The contingent fee of $3.00 for each quarter is payable at the beginning of the quarter.

A fee of $1.00, payable at the beginning of each quarter, is charged each student for the use of the typewriter.

The total University charge during the first quarter for students from West Virginia in the Commercial School amounts to $8.00, and each succeeding quarter $4.00.

ENTRANCE REQUIREMENTS

The requirements for admission to the commercial course are nine preparatory units, of which, two units in English, one unit in mathematics, one-half unit in physical geography, one-half unit in bookkeeping, one-half unit in drawing, one unit in history, and one-half unit in civil government, are prescribed; the remaining three units are elective.

COMMERCIAL COURSE

A diploma of graduation is granted any student who satisfies all entrance requirements and satisfactorily completes the twenty-two college and technical courses prescribed, as follows:

Department and subject	*Course Numbers*	*Course Credits*
English:—		
Composition and rhetoric	7	1
English literature	8	1
English literature	9	1
Accounting:—		
Accounting practice	2	1
Accounting and office work	3	1
Corporation accounting	5	1
Economics:—		
*Principles of economics	1	1
*Distribution of wealth	2	1

*Money and banking	4	1
*Public finance	5	1
Commercial Law:—		
*Law contracts	1	1
*Negotiable paper and bailments	2	1
*Sales and partnership	3	1
History:—		
Commercial geography	1	1
*English social and industrial history	19	1
*American social and economic development	28	1
Approved Electives:—		6
Total		22

Detailed description of the courses marked with an asterisk may be found in the catalogue of the Colleges of the University.

The electives may be chosen from any of the courses in the University which the student is qualified to enter, subject to the advice and consent of his class officer.

STENOGRAPHIC COURSE

The aim of this course is to furnish a thorough, practical knowledge of stenography. The entrance requirements are six preparatory units, of which two units in English are prescribed and the remaining four units are elective.

A certificate is granted any student who satisfies all entrance requirements and completes satisfactorily the following prescribed courses: English, three courses, accounting, two courses, stenography, three courses, and typewriting, three courses.

SPECIAL COURSES

Students from the other departments of the University are permitted to make arrangements by which they can take special courses in stenography, typewriting, accounting, etc., without additional fees.

DEPARTMENTS OF INSTRUCTION

ACCOUNTING

Mr. WILLIS

1. **Elementary Business Practice.** The object of this course is to lay a solid foundation in the study of accounting as a science. Every facility is offered the student to gain a knowledge of the elements of single and double entry accounts; the use of books of original entry; the use of ledgers and books of permanent record; the use of trial balances; abstracts of single entry accounts; the methods of detecting and correcting errors in books of original entry, ledgers, etc.; the use and method of ruling, etc.; the methods of closing single and double entry ledgers. The teaching in this course is accompanied by constant drill in the application of established rules.

Fall, Winter, Spring, 8:30; 12 M.

2. **Accounting Practice.** An introductory course consisting of business practice; extensive drills in the use of vouchers, files; journalizing, posting, etc. In this course, the student familiarizes himself with all the elementary rules and fundamental principles of bookkeeping; is engaged as a bill clerk, shipping clerk, warehouseman, secretary and bookkeeper for a firm doing a merchandise business. Prerequisite, Accounting 1. Fall, Winter, Spring, 8:30; 12 M.

3. **Accounting and Office Work.** A continuation of course 2. The student becomes a member of the firm, general manager and bookkeeper; frequent drills in making inventories; statements of resources and liabilities, financial statements, balances and balance sheets, etc.; writing articles of agreement, deeds, mortgages, bills of sale, etc.; adjustment of losses and settlements with insurance companies; changing the firm and the kind of business, etc.; and changing from double to single entry bookkeeping. Prerequisites, Accounting 1 and 2.

Fall, 9:30; 12 M.

4. **Special Accounting.** A theoretical course in keeping accounts in special lines of business as lumber, shipments and consignments, installments, etc. The object of this course is to familiarize the student with the technical terms of various lines of business, and to furnish him with a practical working knowledge of the accounts necessary to handle specific lines of trade. Department store accounting is a special feature of this course. The work outlined in the text-book to be done by the student has been taken from actual accounts kept

in the different kinds of business mentioned. Prerequisites, Accounting 1 and 2. Winter, 9:30; 12 M.

5. **Corporation Accounting.** The formation of a corporation and its operation; the records of the secretary and the accounts growing out of the minutes, etc.; the accounts affected by issuing certificates of stock, their transfer, their surrender; additional stocks, dividends, changing from partnership into corporations, etc.; methods of preparing for publication financial statements, etc. Prerequisite, Accounting 3. Spring, 9:30; 12 M.

6. **Accounting Procedure.** Installation of accounting systems; exposition of the modern counting-house methods and business practices; theory of accounts and its adaptability in practical work; accounts which give the business man at a glance the commercial rating to which the creditor is entitled; books of original entry; analysis of accounts of trades, corporations, executors, etc.; depreciation of current assets; liabilities; fixed and working capital; expert methods of opening and closing accounts in various lines of trade; realization and liquidation of accounts; statements of affairs of insolvent debtors; statements establishing commercial rating and credit; a consideration of personal and impersonal accounts; methods of combining accounts for quick and accurate consideration of the condition of the business, etc. Winter, 10:30; 12 M.

7. **Bank and Trust Company Accounting.** A complete exposition of the methods of accounting which relate, principally, to banks and trust companies. A short, complete course is given in the details of bank-bookkeeping, illustrating the various forms and blanks used in up-to-date banks. The accounting of the trust company as agent, trustee, and underwriter, is illustrated and exemplified. In connection with the lectures in this course, blanks and forms collected from the best regulated banks and trust companies in the country, are examined by the students. One-half course. Prerequisite, Accounting 3. Winter, 11:30; 12 M.

8. **Executors and Trustees.** Financial reports of executors and trustees; the legal rights and duties of trustees and executors as they relate to accounting; the vouchers necessary for an executor; cases in which the vouchers may be excused; the proper accounting methods of executors and trustees; apportionment between the principal and income at the initiatory stage of an estate; the termination of a beneficiary's interest; difference between the accounting of an executor and a proprietor; executor's accounts by both single and double entry;

the three divisions of accounts and the significance of each; the various kinds of estates and how treated; the disposition of personal and real property; what a trustee can do and what he can not do from an accountant's standpoint. One-half course. Prerequisite, Accounting 2. Spring, 11:30; 12 M.

9. **Practical Banking.** The object of this course is to give the student a comprehensive knowledge of the inside workings of a bank, and of the laws regulating the national and state banks. The subjects treated are depositors, resources, loans and discounts, circulating notes, credit and commercial paper, accommodation paper, checks and bills of exchange, branch banking, the duties of officers and clerks, the liabilities of officers, directors and stockholders, and bank management in general. Prerequisite, Accounting 3. Spring, 11:30; 12 M.

10. **Corporation and Trust Company Finance.** An exposition of the financial organization and conduct of large corporations; the accounting necessary in railroad and industrial combinations and mergers; a review of the laws and customs that govern the financial management of foreign corporations; the proper basis for the capitalization of a corporation; legislation affecting the financial affairs of corporations; the various forms of incorporations adopted by industrial companies; the advantages to the corporations of the various classes of bonds and stocks; the relations of subsidiary companies and corporations; receiverships, bankruptcy, and reorganization. Prerequisite, Accounting 7. Winter, 11:30; 12 M.

11. **Railroad Accounting. Station Work.** This course is designed to train young men for railroad station agents. The course covers the entire work done in a railroad freight station from the loading of cars to the minutest detail in the office work. The student learns station work as it is carried on to-day by the use of a complete set of vouchers like those used by the Baltimore and Ohio and Pennsylvania railroads. The technical work embraces the classifying of freights, rating, auditing, checking, adjusting discrepancies, excess tonnage, demurrage, routing, apportioning rates, etc. Text, Graden System Railroad Technical Training. Prerequisite, Accounting 1.

Fall, Winter, Spring, 10:30; 12 M.

12. **Railroad Accounting. General.** An examination of the system of accounting necessary to meet the demands of the complicated railroad methods of modern times, embracing organization, capitalization, speculation, rate making, competition, pooling, consolidation and gen-

eral stock manipulation, etc. Prerequisites, Accounting 5 and 11.
Winter, 12 M.

COMMERCIAL GEOGRAPHY AND HISTORY OF COMMERCE

Mr. WILLIS

1. Commercial Geography. A description of the surface of the earth, with special reference to the production, manufacture, transportation, and exchange of articles of trade. A general outline of the countries of the world; soil, climate, agricultural products, forests, manufactories, quarries, mines, centers of industry, foreign relations, ways of communication, social relations and conditions, imports, exports, and markets. Special attention is given to the study of the United States: area, climate, position, population, natural resources, raw products, manufactures, waterways, railways, seaports, exports, imports, reasons for rapid growth of western cities, industrial possibilities. Adams' Commercial Geography. Fall, 10:30; 6 M.

STENOGRAPHY

Mr. STEELE

1. Theory. Fundamental principles; special attention to the execution of consonants; thorough drills in the use of vowels and vowel positions; word signs and special phrasing; cumulative principles; modifications of consonants and affixes. Pitman-Howard's Shorthand Amanuensis. Prerequisite, English 3.
Fall, 8:30; Winter, 9:30; Spring, 10:30; 30 M.

2. Cumulative Phrasing. A continuation of course 1. Cumulative principles and affixes are introduced in their natural order; cumulative phrasing; special contractions and special phrasing, etc. Pitman-Howard's Shorthand Amanuensis.
Fall, 10:30; Winter, 8:30; Spring, 9:30; 30 M.

3. General Dictation. Letter writing, speed practice, and writing after general dictation; writing testimony and argument, a special feature; special attention to each student to prevent speed practice from destroying accuracy of notes, etc.
Fall, 9:30; Winter, 10:30; Spring, 8:30; 30 M.

4. Speed Practice and General Dictation. A continuation of course 3. Fall, 10:30; Winter and Spring, 11:30

5. **Court Reporting.** This is a special course in court reporting for students who have completed courses 1, 2, and 3. This work is given in connection with the moot court in the College of Law. The student is appointed court stenographer by the judges of the court, and reports the cases tried in that court and in the justices' court of the same department. Duplicate reports are submitted for inspection. This gives the student actual practice in court reporting, as required by the West Virginia law. In addition to this actual practice, daily drills are given to acquire speed in writing and transcribing testimony, etc. Brown's Court Reporting. Winter, 2:00 to 4:00 P. M.

TYPEWRITING

Mr. STEELE

1. **Typewriting.** The Smith Premier machine is used for instruction and practice. The instruction includes thorough drills on the various exercises outlined in the text. This furnishes the student with a knowledge of the mechanism of the machine, which is essential in its adjustment. Barnes' Touch Typewriting.

Fall, Winter, Spring, 8:30 to 12:30; 30 M.

THE PREPARATORY SCHOOL

THE FACULTY

ALFRED JARRETT HARE, A.M., *Principal and Professor of the Latin Language and Literature*

HARRY ANTHONY EATON, A.B., LL.B., *Captain U. S. Army, Professor of Military Science and Tactics and Commandant of Cadets*

WILLIAM JACKSON LEONARD, *Associate Professor of Fine Arts*

ANTHONY WENCEL CHEZ, A.B., *Director of Physical Training*

SIMEON CONANT SMITH, A.M., *Instructor in English*

DAVID DALE JOHNSON, A.M., *Instructor in English*

CLARENCE POST, A.B., *Instructor in Physics and Physical Geography*

THOMAS BOND FOULK, B.S.C.E., *Assistant in Mathematics*

MARGARET BUCHANAN, A.B., *Assistant in Greek and Mathematics*

LOUISE FERRIS CHEZ, *Assistant Director of Physical Training*

MAUDE FULCHER CALLAHAN, A.B., *Student Assistant in History*

ROBERT LEE COLE, *Student Assistant in History*

Note:—Instruction in modern languages and in natural sciences is carried on in connection with the classes in these subjects in the College of Arts and Sciences.

INFORMATION

This is distinctly a preparatory school and aims primarily to prepare young men and young women for the freshmen class of the University. The course of study is such, however, that any one who has successfully completed it, will have received a fairly liberal education.

Thoroughness is imperatively insisted upon in every department, and the quality of the work rather than the quantity thereof is uniformly demanded. The standard of scholarship is such that only young people of studious habits, reasonably fair ability, and a willingness to work should seek admission. A young man or woman who has a record of failure in other schools is not likely to succeed here.

The discipline is mild and reasonable, but firm. Young people who do not choose to study and to deport themselves as ladies and gentlemen will be summarily dismissed. The preparatory department is not a reform school.

Special pains are taken by the principal and his assistants to render the school life valuable and pleasant to those who are under their care. Preparatory students have all the advantages of the University library, lectures, cadet corps, gymnasium, athletic grounds, etc.

Candidates for admission must be at least fifteen years of age, and should have a good knowledge of the branches taught in the public schools of the state. They should be prepared to pass a creditable examination in reading, spelling, writing, geography, English grammar, and arithmetic. Applicants for admission from an accredited preparatory school will receive credit for work done in such school upon the presentation of a correct application blank properly filled out and signed by the head of the school.

After September 1, 1910, candidates for admission must have credit for at least three units out of the fifteen units required for admission to the College of Arts and Sciences.

FEES

Tuition is free to West Virginia students. For students from other states the tuition is $10.00 per quarter, or $25.00 per year.

A matriculation fee of $5.00 is payable upon entering the preparatory school by all students except cadets.

The contingent fee is $2.00 per quarter and is payable by all students except cadets.

The athletic fee is $2.00 per quarter for the fall and spring quarters, and $1.00 for the winter quarter, payable at the beginning of each quarter by all students.

SOCIETIES AND PRIZES

I. LITERARY SOCIETIES

By an order of the Regents of the University every young man is required to become a member of one of the two literary societies organized in the preparatory school, to attend its meetings regularly, and to appear upon the programme not fewer than eight times during any school year.

No additional expense is incurred by reason of this membership.

II. PRIZES

1. The Inter-Society Prizes

Prizes aggregating ninety dollars are awarded annually by the Regents of the University to the literary society whose representatives shall in a public contest excel in declamation, original oration, and debate.

2. The Regent's Prize in Declamation

The Regents of the University annually award to the student in the preparatory school who excels in declamation, a prize of thirty dollars, and to the one who ranks second, a prize of twenty dollars.

DEPARTMENTS OF INSTRUCTION

BOTANY

1. **Elementary Botany.** The courses in elementary botany are arranged for those who wish to obtain a practical knowledge of plants in general. An introductory study of the structure and physiology of seed plants is followed by the physiology, morphology, and life history of representative plants of common occurrence, selected from the algae, fungi, liverworts, mosses, ferns, and seed plants, with special reference to their economic importance. Lectures, recitations, and laboratory work. Fall, 10:30; N. F.

2. **Elementary Botany.** Continuation of course 1, which is a prerequisite. Winter, 10:30; N. F.

CHEMISTRY

1. **Inorganic Chemistry.** This course is designed for beginners and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties, and compounds of the non-metallic elements, and the principles and theories of chemical philosophy. Experimental lectures, laboratory work, and recitations.

Fall, first section, 9:30; section section, 11:30; 20 S.

2. **Inorganic Chemistry.** This course includes the study of the metallic elements, and special attention is paid to the application of chemistry to agriculture, engineering, medicine, and every-day life.

Winter, first section, 9:30; second section, 11:30; 20 S.

3. **Organic Chemistry.** This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work, and recitations.

Spring, first section, 9:30; second section, 11:30; 20 S.

On Mondays, at 1:30, during the Winter and Spring quarters, a special laboratory course is given to accompany courses 1, 2, and 3, which is prescribed for all students who are taking the courses named. Students who have completed these courses elsewhere and have received credit for the same may be admitted to this laboratory course and will receive credit for the work done.

ENGLISH

Mr. JOHNSON and Mr. SMITH

1. **Grammar and Composition.** This, with the following course, involves a practical drill in orthography, punctuation, and the principles of grammar. Composition work is based upon the reading and study of selections from some American authors.

Fall, 9:30; Mr. JOHNSON, 10 M.

2. **Grammar and Composition.** Continuation of course 1.

Winter, 9:30; Mr. JOHNSON, 10 M.

Note:—Courses 1 and 2 are intended for those students whose training in elementary English is defective, and are not counted a part of the three units in English required for entrance to the University.

3. **Elementary Rhetoric and Composition.** In this and the two following courses, careful drill in reproduction and original composition is continued. In each course one of the English or American classics is studied closely. Exercises in oral composition, in writing paraphrases and amplifications, in the meaning and use of words, and in construction of sentences and paragraphs, are based on the reading.

Spring, 9:30; Fall, 8:30; Mr. JOHNSON, 10 M.

4. **Elementary Rhetoric and Composition.** Continuation of course 3.

Fall, 10:30; Winter, 8:30; Mr. SMITH, 13 W.

5. **Elementary Rhetoric and Composition.** Continuation of course 4.

Winter, 10:30; Spring, 8:30; Mr. SMITH, 13 W.

6. **Composition and Rhetoric.** In this, and the following course, careful drill in composition is continued, embracing a study of the sentence, the paragraph, the theme, diction, the figures of speech, and the important forms of prose and poetry. In each of these courses one of the English or American classics is studied closely in class, and book reviews and outlines are prepared of other required readings. Some attention is paid to the review of grammatical principles and to the history of the English language.

Spring, 10:30; Fall, 8:30;Mr. SMITH, 13 W.

7. **Composition and Rhetoric.** Continuation of course 6.

Fall, 10:30; Winter, 11:30; Mr. JOHNSON, 10 M.

Note:—Course 7 will also be offered in the Spring quarter when there is sufficient demand.

8. **English Literature.** A study of some of the English classics prescribed in the college entrance requirements. As far as practicable, this work in literature is made to illustrate and enforce the knowledge already gained from the study of rhetoric. Critiques and reviews.

Winter, 10:30; Spring, 11:30; Mr. JOHNSON, 10 M.

9. **English Literature.** Continuation of course 8.

Spring, 10:30; Fall, 11:30; Mr. JOHNSON, 10 M.

Note:—Students will not be admitted to courses 8 and 9 until they have credit for all the preceding courses.

FRENCH

1. **Elementary Course.** Grammar, reading, and composition. Stress is laid on the pronoun and the conjugation of the verb. Con-

stant practice in pronunciation and oral understanding. Fraser and Squair's French Grammar; Aldrich and Foster's French Reader.

Fall, first section, 8:30; 11 W.; second section, 9:30; 2 M.; third section, 10:30; 2 M.

2. **Elementary Course.** A continuation of course 1. Grammar, reading, and composition, with continued practice in pronunciation and oral understanding. Fraser and Squair's French Grammar; Aldrich and Foster's French Reader.

Winter, first section, 8:30; 11 W.; second section, 9:30; 2 M.; third section, 10:30; 2 M.

3. **Elementary Course.** A continuation of course 2. Grammar, reading, composition, and oral understanding. Halévy's L' Abbé Constantin or Verne's Vingt Mille Lieues sous les Mers.

Spring, first section, 8:30; 11 W.; second section, 9:30; 2 M.; third section, 10:30; 2 M.

4. **Fiction of the Nineteenth Century.** Reading of Merimeé's Colombo, Balzac's Contes, and George Sand's La Petite Fadette. Composition once a week. Particular attention given to pronunciation and oral understanding. Fall, 10:30; 11 W.

5. **Fiction of the Nineteenth Century.** A continuation of course 4, with additional emphasis on syntax and idioms. Alphonse Daudet's Tartarin de Tarascon, Pierre Loti's Pêcheur d' Islande, and Anatole France's Le Crime de Sylvestre Bonnard. Composition as above. Winter, 10:30; 11 W.

6. **France and the French People of To-day.** Study of the country from a commercial and geographical standpoint; Parisian and provincial life; reading and discussion in French of magazine articles and questions of popular interest. Daily theme work and as much French conversation as practicable. Work largely based on Foncin's Le Pays de France. Spring, 10:30; 11 W.

SPANISH

The following courses have in view both the study of literature and the application of the language to commercial uses and conversation. The close relations of our country with those of Spanish America necessitate the study of Spanish as a living and not as a dead language. Hence, while due attention is given to the rich literature of Spain, full opportunities are offered to acquire a practical knowledge of the language.

1. **Elementary Course.** Grammar and reading, with practice in pronunciation, composition, and oral understanding. Loiseaux' Elementary Spanish Grammar and Ramsey's Elementary Spanish Reader.
Fall, 9:30; 11 W.

2. **Intermediate Spanish.** Grammar, oral exercises, easy conversation and select readings from contemporary authors. Loiseaux' Elementary Spanish Grammar and Fontaine's Flores de España.
Winter, 9:30; 11 W.

3. **Modern Fiction.** Study of two or three works to be selected from the following: Perez-Galdós' Doña Perfecta and Marianela; Valdés' José and La Algeriá del Capitán Ribot; Valera's El Pájaro Verde; Alarcón's El Capitán Veneno and El Niño de la Bóla.
Spring, 9:30; 11 W.

GERMANIC LANGUAGES AND LITERATURES

NOTE:—The text-books named in the following courses may be changed at any time, but the grade and character of the work outlined in each will remain the same.

1. **Elementary German.** The object of the course is to acquaint the student with the elements of the grammar, to give him a reading knowledge of the easiest German prose, and as much practice as possible in pronunciation. Vos' or Thomas' Grammar; Super's German Reader, Part I.
Fall, first section, 9:30; second section, 10:30; Winter, 11:30; 18 W.

2. **Elementary German.** A continuation of course 1; reading of easy prose and poetry; several poems will be memorized. Elementary work in composition. Super's Reader; Lechner's Legends of German Heroes; Collar's German Lessons.
Winter, first section, 9:30; second section, 10:30; Spring, 11:30; 19 W.

3. **Elementary German.** A continuation of course 2; reading, dictation, elementary work in composition, accompanied by a review of the main points of the grammar; Immensee; Hoeher als die Kirche; L'Arrabiata; Collar's German Lessons.
Fall, 11:30; Spring, first section, 9:30; second section, 10:30; 19 W.

4. **German Prose.** Rapid reading of prose by modern authors to familiarize the student with the more general phases of the language. Fall, 8:30; 19 W.

5. **Composition.** Translation of English prose into German; discussion of grammatical points in connection with the translation; dictation; study of the irregular verbs. Pope's Prose Composition; Thomas' Grammar, Part II. Winter, 8:30; 19 W.

6. **German Poetry.** Translation of one long poem and one drama; reading of many and memorizing of several well-known poems. Hermann und Dorothea; Die Jungfrau von Orleans; Klenze's Deutsche Gedichte. Spring, 8:30; 19 W.

GREEK LANGUAGE AND LITERATURE

Miss BUCHANAN

1. **White's First Greek Book (Chapters I-XL).** This course is for beginners. The work covers pronunciation, accent, declensions and conjugations, etymology of words, and simple translations from Greek into English and from English into Greek to illustrate the principles of grammar as given in the text. Fall, 9:30; 7 M.

2. **White's First Greek Book (Completed).** A continuation of course 1; much attention is paid to the vocabulary; daily exercises in sight reading. The first book of the Anabasis is read in connection with courses 1 and 2. Prerequisite, Greek 1. Winter, 9:30; 7 M.

3. **Xenophon's Anabasis (Books II, III, and IV).** Prose composition; a fuller knowledge of the grammar. Prerequisites, Greek 1 and 2. Goodwin's Xenophon's Anabasis; Goodwin's Greek Grammar; Pearson's Greek Prose Composition. Spring, 9:30; 7 M.

4. **Select Readings.** Selections from the works of Xenophon and Herodotus; continued sight reading; review of Greek accidence and further study of syntax. Fall, 10:30; 30 L.

5. **Lysias' Orations.** Given alternately with Greek 7. A study of the form of Greek orations and Lysias' style; collateral library work assigned to each student; sight reading. Prerequisites, Greek 1, 2, 3, and 4, or their equivalent. Winter, 10:30; 30 L.

6. **Homer's Iliad or Odyssey (Books I, II, and III) and Homeric Verse.** All the text is read metrically. Etymology, mythology, and

prosody are studied in connection with the text. Seymour's Iliad. Collateral reading: Jebb's Introduction to Homer; Gladstone's Time and Place of Homer. Prerequisites, Greek 1, 2, 3, 4, 5.

Spring, 10:30; 30 L.

HISTORY AND CIVICS

Mrs. CALLAHAN and Mr. COLE

The following courses are intended to present a general outline of the field of history and to furnish a suitable introduction to the college courses in history. The course in civics gives a part of the preparation required of students who desire admission to the college courses in political science. Preparatory students are advised not to take more than one course in history or civics in one term.

1. **History of Greece.** An outline study of Greek history, with special reference to the development and peculiar characteristics of Greek civilization. Fall, 11:30; 22 W.

2. **History of Rome.** An outline study of Roman history from the founding of Rome to 476 A.D. Winter, 11:30; 22 W.

3. **Mediaeval and Modern History.** A general survey of the history of western Continental Europe from the break-up of the Roman empire to the present time. Spring, 11:30; 22 W.

4. **History of England.** An outline of English history from the earliest times to the present. The founding, unfolding, and expansion of the English nationality, and the growth of English institutions.

Fall, 11:30; Mrs. CALLAHAN, 22 W.

5. **United States History.** A general course of narrative and political history required for admission to all college courses in United States history. Winter, 11:30; Mr. COLE, 22 W.

6. **Civics. West Virginia and the Nation.** This course presents an outline of (1) the government of West Virginia; (2) the structure of the Federal government and the methods of governing under it; and (3) the rights and duties of American citizens. Prerequisite, course 5. Spring, 11:30; Mrs. CALLAHAN, 22 W.

LATIN

Professor HARE

1. **Etymology.** Chase and Stuart's First Year in Latin, pages 9 to 104. Fall, 11:30; Spring, 8:30; 11 M.

2. **Syntax.** Chase and Stuart's First Year in Latin, pages 104 to 180. Winter, 11:30; 11 M.

3. **Oratio Obliqua and Caesar (Book I, Chapters 1 to 29).** Chase and Stuart's First Year in Latin, completed. Spring, 11:30; 11 M.

4. **Caesar's Gallic War (Books I and II).** Fall, 10:30; 11 M.

5. **Caesar's Gallic War (Books III and IV).** Winter, 10:30; 11 M.

6. **Cicero's Orations against Catiline I, II, and III.** Fall, 8:30; Spring, 10:30; 11 M.

7. **Cicero's Fourth Oration against Catiline, the Oration for Archias, and the Aeneid of Virgil (Book I).** Fall, 9:30; 11 M.

8. **Virgil's Aeneid (Books II, III, and IV).** Winter, 9:30; 11 M.

9. **Virgil's Aeneid (Books IV, V, and VI).** Spring, 9:30; 11 M.

Latin Composition is required once a week in courses 7, 8, and 9.

Allen and Greenough's Latin Grammar, revised edition, is used in courses 4 to 9.

The courses must be taken in the order named.

MATHEMATICS

Miss BUCHANAN and Mr. FOULK

Algebra

1. **Algebra to Fractions.** Hedrick's Algebra for Secondary Schools to page 117.
Fall, 10:30; Spring, 8:30; Miss BUCHANAN, 3 M.
Winter, 10:30; Mr. FOULK, 7 M.

2. **Algebra to Quadratic Equations.** Hedrick's Algebra for Secondary Schools to page 203. Winter, 10:30; Miss BUCHANAN, 3 M.
Spring, 10:30; Mr. FOULK, 7 M.

3. **Algebra to Progressions.** Hedrick's Algebra for Secondary Schools to page 322. Fall, 11:30; Mr. FOULK, 7 M.
Spring, 10:30; Miss BUCHANAN, 3 M.

A second section of algebra 1, 2, and 3 is formed when the class is large.

4. **Algebra. Review Course.** Simple equations, discussion of problems, zero and infinity, inequalities, involution, theory of exponents, radicals, quadratic equations. Wentworth's College Algebra.
Fall, 8:30; Miss BUCHANAN, 3 M. Winter, 11:30; Mr. FOULK, 7 M.

Geometry

5. **Plane Geometry.** Rectilinear Figures, and the Circle. Wentworth's Plane Geometry, Books I and II.
Fall, 9:30; Winter, 8:30; Mr. FOULK, 7 M.

6. **Plane Geometry.** Wentworth's Plane Geometry, Books III and IV. Winter, 9:30; Spring, 8:30; Mr. FOULK, 7 M.

PHYSICS

Mr. POST

1. **Elementary Physics.** Recitations, supplemented by experiments and laboratory exercises. One exercise per week at least is devoted to individual laboratory work. Rowland and Ames' Elements of Physics. Prerequisite, Plane Geometry 1. Fall, 8:30; 11 S.

2. **Elementary Physics.** Continuation of course 1.
Winter, 8:30; 11 S.

PHYSICAL GEOGRAPHY

Mr. POST

1. **Physical Geography.** An elementary course.
Spring, 10:30; 30 S.

PHYSICAL TRAINING

Director CHEZ and Mrs. CHEZ

By an order of the Board of Regents, physical training is required of all young men in the Preparatory School in the fall quarter of each year. A regulation suit is required. This suit consists of a black quarter-sleeve jersey, black knee tights, long black stockings, and white gymnasium shoes.

PHYSIOLOGY

1. **Elementary Physiology.** Fall, Spring, 9:30; 2 W.
For advanced or well-matured preparatory students.

2. **Elementary Physiology.** Continuation of course 1.
Winter, 9:30; 2 W.

ZOOLOGY

1, 2, and 3. **General Zoology.** The aim of these courses is to acquaint the student with the chief types of animal structure and with the general principles of biology. Lectures and laboratory work.
Fall, Winter, Spring, Tuesday and Thursday, 8:30; 17 W.

THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION

STATION COMMITTEE

C. M. BABB JOHN B. FINLEY

STATION STAFF

JAMES H. STEWART, A.M., *Director and Agriculturist*

BERT HOLMES HITE, M.S., *Vice Director and Chemist*

WILLIAM EARL RUMSEY, B.S.Agr., *Entomologist in Charge*

WELTON MARKS MUNSON, Ph.D., *Horticulturist*

NAHUM JAMES GIDDINGS, M.S., *Bacteriologist*

FREDERICK E. BROOKS, *Associate Entomologist*

HORACE ATWOOD, M.S.Agr., *Assistant Agriculturist*

FRANK BATSON KUNST, A.B., *Assistant Chemist*

CHARLES EDWARD WEAKLEY, Jr., *Assistant Chemist*

J. H. BERGHINS KRAK, *Assistant Chemist*

ARTHUR LINCOLN DACY, B.Sc., *Assistant Horticulturist*

ALEXANDER REID WHITEHILL, Ph.D., *Treasurer*

WILLIAM J. WHITE, *Clerk*

MARTHA A. STEWART, *Librarian*

ALICE ENGLE, *Stenographer*

The Experiment Station is a distinct and separate department of the University, and was established by the Board of Regents in 1887, by authority of an act of Congress, known as the Hatch Act, which was passed on the 2nd day of March of that year. The funds for carrying on the operations of the station, with the exception of its earnings, are derived wholly from the general government. The aforesaid act in section 2 fully states the object and purposes of the Experiment Station as follows:

"That it shall be the object and duty of said experiment station to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches and experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states and territories."

Bulletins and annual reports setting forth results of experiments and investigations conducted at the station are published for gratuitous distribution, and will be mailed free to any citizen of the state applying for them. The station invites correspondence, suggestions, and advice from farmers and others interested in this work, and all such, with reference to bulletins, experiments, or any matter relating to agriculture, will be welcomed and will receive careful and prompt attention. Correspondence should be addressed to the director of the station.

DIPLOMAS AND CERTIFICATES

COMMENCEMENT, JUNE 18, 1908

Artists' Diploma. Piano Department

Marie Louise Dickinson	Williamsburg, Va.
Lulu Genevieve Kelley	Morgantown
Helen Loveland Treat	Morgantown

Teachers' Certificate. Piano Department

Mamie Waters Pracht	Grafton

Commercial Diploma

Anna Gans Sturgiss	Morgantown

LIST OF STUDENTS

In the following list are included: (a) the names of all students regularly enrolled in the various schools of the University, (b) the names of those registered in the School of Sunday School Methods conducted in connection with the Summer School, (c) the names of those registered only in the Department of Physical Training, (d) the names of those enrolled in the Agricultural Extension Schools carried on by the College of Agriculture. In the case of students in the Preparatory School the year or class in which they were enrolled on the first day of January, 1909, is indicated in the third column.

Allen, Edna Clare	Grafton	Summer School
Allen, D. W.	Sherrard	Agr. Ex. S.
Allen, James Cornwall	St. Marys	4th Year Prep.
Allen, William Richard	Sherrard	Agr. Ex. S.
Allen, Russell Wayne	Morgantown	Music
Anderson, Florence Elizabeth	Morgantown	Physical Training
Anderson, Isabella	Parkersburg	Summer School
Anderson, Walter Alvin	Lima, Ohio	Special Prep.
Andrews, Caroline Elizabeth	Mannington	Summer School
Appleton, Martha H.	Parkersburg	Summer School
Armstrong, Archie Philip	Morgantown	2nd Year Prep.
Armstrong, Mary Alice	Tressel	Summer School
Artis, Bessie	Connellsville, Pa.	Summer School
Ash, Columbus	Roberts	1st Year Prep.
Ash, Ray	Ashley	1st Year Prep.
Ashton, John James	Morgantown	Music
Baab, Esther Lorella	Los Angeles, Cal.	S. S. Methods
Bailey, Sebie	Buckhannon	Summer School
Baird, Hallie Adella	Elm Grove	Summer School
Baker, Emmett Conner	Sinks Grove	4th Year Prep.
Baker, Marguerite	Morgantown	Music
Baidwin, Josephine Louise	Newark, N. J.	S. S. Methods
Baldwin, Mabel Cornelia	Fort Erie, Ont.	Music
Bambrick, Walter Steenrod	New Cumberland	4th Year Prep.
Barker, Delia Lesselle	Morgantown	Commercial
Barnes, Lena Ice	Ravenswood	1st Year Prep.
Barnes, Nellie Spence	Newark, N. J.	S. S. Methods
Barnes, Sylvia Maybel	Bridgeport	Summer School

Barr, Daniel Henry	Morgantown	2nd Year Prep.
Bartlett, Harriet Clair	Parkersburg	Summer School
Bartlett, Lyda Miria	Parkersburg	Summer School
Barnes, John Lewis	Connellsville, Pa.	1st Year Prep.
Baumgartner, Hugh Homer	Morgantown	4th Year Prep.
Beach, Grace Virginia	Parkersburg	Summer School
Beaumont, Arthur Brittingham	Morgantown	Music
Beaumont, Catherine Elizabeth	Morgantown	S. S. Methods
Beaumont, Herbert John	Morgantown	1st Year Prep.
Becker, Thomas Henry	Bluefield	4th Year Prep.
Behrens, Dora Mina	Sherrard	Agr. Ex. S.
Behrens, Lena Hannah	Sherrard	Agr. Ex. S.
Bell, Reppa	Morgantown	Special Prep.
Bennett, Edward Campbell	Eltridge	Summer School
Bennett, Orla William	Belleville	Summer School
Betz, Mary Maud	Martinsburg	Summer School
Bird, Grace	Martinsburg	Summer School
Black, Edward Virtue	Elizabeth	S. S. Methods
Black, James Downing	Sherrard	Agr. Ex. S.
Black, Louis Eckert	Clarksburg	S. S. Methods
Blenks, Grace	Point Marion, Pa.	Music
Bless, Saul	Morgantown	Music
Bloom, Carrie Mildred	Morgantown	Physical Training
Blum, Edward Likes	Baltimore, Md.	Special Prep.
Boehler, Louise	Morgantown	Music
Boggess, Dora Lee	Salem	Summer School
Boggs, Caroline Ann	Morgantown	Music
Bonar, John Stanley	Benwood	Summer School
Booth, Isabella	Belington	Summer School
Bosley, Ida	Morgantown	Commercial
Bosley, Iva	Morgantown	Commercial
Boyd, Theophilus Sutton	Morgantown	S. S. Methods
Brand, Linnie	Morgantown	1st Year Prep.
Bredbenner, Nell Alice	Dorranceton, Pa.	Music
Briggs, Lucy H.	New Martinsville	Summer School
Brinkley, Rose	Sutton	Summer School
Brock, Eleanor	Morgantown	1st Year Prep.
Brown, Hazel Mae	Morgantown	Commercial
Brown, Howard Condit	Clay	2nd Year Prep.
Brown, Roston	Swope	Summer School
Brown, Virginia	Morgantown	Music
Brownfield, Samuel Miller	Uniontown, Pa.	1st Year Prep.
Bruce, Lottie Belle	New Martinsville	Summer School
Bryner, Mary Foster	Peoria, Ill.	S. S. Methods

Buchanan, Aaron Moore	Morgantown	S S. Methods
Buchanan, Sarah Wiley	Morgantown	S S. Methods
Buckey, William Emmett	Beverly	Summer School
Bumgarner, Jennie	Letart	Summer School
Burchinal, Arthur Paul	Point Marion, Pa.	1st Year Prep.
Burdett, Fred Herbert	Morgantown	Commercial
Burdine, Ruth	Morgantown	Art
Burke, Aileen Dashiell	Hinton	Summer School
Burkhardt, Marie Louise	Morgantown	Physical Training
Burkhardt, Mathilda Margareta	Morgantown	Physical Training
Burrell, Lewis Glenn	Weston	3rd Year Prep.
Butcher, Hazel Grant Ward	Fairbanks	1st Year Prep.
Butcher, Jesse Glenn Lance	Fairbanks	1st Year Prep.
Byard, Nellie	Cameron	Summer School
Caddell, Eva Gladys	Morgantown	Music
Caddell, Mary Elizabeth	Morgantown	Music
Cady, Elizabeth	Morgantown	Music
Caldwell, James Lewis	Huntington	3rd Year Prep.
Califf, John William	Glady	1st Year Prep.
Calvert, Charles Hukill	Cassville	4th Year Prep.
Carbonell, Enrique	Mayaguez, Porto Rico	Summer School
Carns, Alfred	Morgantown	2nd Year Prep.
Carter, Jessie Pearl	Nineveh, Pa.	Summer School
Casler, Frank Glendia	Berkeley Springs	2nd Year Prep.
Cassell, Grace Albertine	Grafton	Summer School
Casto. Allen Thurman	Morgantown	3rd Year Prep
Casto, Grover Cleveland	Morgantown	Commercial
Casto, Ruth Orpha	Morgantown	Commercial
Cavalier, Bertha Agnes	Wallace	Music
Chalmers, Margaret Allison	Morgantown	Physical Training
Chamberlin, Harrie Rogers	Morgantown	S. S. Methods
Chambers, Vannetta May Bell	Martinsburg	Summer School
Christopher, Florence	Sistersville	Summer School
Christy, Mary Louise	Morgantown	Physical Training
Clarke, Nannie	Wheeling	S. S. Methods
Cleavenger, Dolores Winifred	Oxford	Summer School
Clinton, Thirza Edna	Parkersburg	Summer School
Coate, Rose Amelia	Wabash, Ind.	Summer School
Cobun, Miles Lincoln	Morgantown	Music
Cohen, Joel Nathan	Morgantown	Music
Colcord, Eugene Lyon	St. Albans	2nd Year Prep.
Cole, James Henderson	Wheeling	2nd Year Prep.
Colebank, Jasper Haymond	Grafton	Summer School
Collins, Voorhees Chester	Easthampton, Mass.	Special Prep.

Combs, Winifred Earl	Beckley	3rd Year Prep.
Comer, Julia Beatrice	Bridgeport	Summer School
Cone, Jessica Gardiner	Eaton, N. Y.	Summer School
Conn, Ella Jane	Smithfield, Pa.	Music
Connell, Russell VanDenersen	Fort Spring	Agr. Ex. S.
Conner, Lena	Wheeling	Summer School
Cooke, Elizabeth Josephine	Morgantown	Music
Cooke, Harvey Elisha	Sherrard	Agr. Ex. S.
Coole, Joseph Chalmer	Sherrard	Agr. Ex. S.
Coombs, Edith Ellwood	Morgantown	Music
Coombs, Forest Pembrook	Morgantown	2nd Year Prep.
Cooper, Cora	Auburn	Summer School
Corbin, Homer Blaine	Catawba	1st Year Prep.
Core, Addison Lee	Cassville	2nd Year Prep.
Core, Myrtle Otella	Core	Music
Core, Rebecca	Cassville	Commercial
Cottrill, Belford Lee	Cedarville	Summer School
Courtney, Catherine	Morgantown	Music
Courtney, Frances Lee	Morgantown	Music
Courtney, Grace Olive	Morgantown	Art
Courtney, John David	Morgantown	Summer School
Courtney, Lizzie Lee	Morgantown	Music
Courtney, Wilma Marie	Morgantown	Music
Cox, Margaret Elizabeth	Morgantown	Music
Cox, Nannie Leigh	Fairmont	Music
Crichton, Walter Greig	Winifrede	Special Prep.
Chriss, Etta Bishop	Flatwoods	Summer School
Crow, Kate Cagey	Cheat Haven	Summer School
Crown, Lillian Conn	Point Marion, Pa.	Summer School
Cruikshank, Winifred	Bemis	Special Prep.
Crummett, Mahala Lane	Huntington	Summer School
Cunningham, Lotta Eleanor	Mannington	Music
Cunningham, Stanley Charles	Parsons	1st Year Prep.
Curry, Lenore Virginia	Fairmont	Summer School
Dadisman, Andrew Jackson	Grafton	Summer School
Dadisman, Ira Lee	Hall	Summer School
Daley, Elvie	Parkersburg	Summer School
Dalinsky, Anna Ida	Morgantown	Physical Training
Dalinsky, Bessie	Morgantown	Music
Dallons, Anna	Morgantown	Physical Training
Danser, Cecil	Tunnelton	Summer School
Danser, Charles Franklin	Tunnelton	Summer School
Davidson, John William	Bridgeport	2nd Year Prep.
Davis, Lida Leota	Bluefield	Summer School

Davis, Marguerite Jane	Morgantown	Music
Davis, Ralph Ely	Fairmont	Summer School
Deahl, Mary	Morgantown	Music
Dean, Anna May	Waverly, Pa.	Music
Dean, Willis Elzie	Bridgeport	1st Year Prep.
Deem, Fred Blaine	Parkersburg	1st Year Prep.
DeGant, Stella Cecilia	Wheeling	Summer School
DeMoss, Bertha Lee	Morgantown	Music
DeMoss, Frederick Eugene	Morgantown	Music
Dent, Lou Moxson	Mona	Music
Deusenberry, Iona Blanche	Morgantown	Commercial
Deusenberry, Jettie Mary	Morgantown	Commercial
Deusenberry, Ruby Dale	Morgantown	Art
DeVault, Walter C.	Morgantown	Commercial
Dornan, Dora Blanche	New Cumberland	Summer School
Douthat, Robert William	Morgantown	S. S. Methods
Ducarme, Earl Oscar	Point Marion, Pa.	Commercial
Dugan, Martha Eleanor	Greensboro, Pa.	Summer School
Duncan, Robert Vance	Claysville, Pa.	4th Year Prep.
Eckes, Daisy Katherine	Roanoke	2nd Year Prep.
Eddy, Elias Newton	Fairmont	S. S. Methods
Edmundson, Gladys Christian	Morgantown	Physical Trainin
Edmundson, Helen Lenore	Morgantown	Physical Trainin
Egbert, Alberta Ruth	Morgantown	Music
Egbert, Freda Dorothy	Washington, D. C.	Summer School
Ely, Albert Elisha	Morgantown	2nd Year Prep.
Ely, Flora Angelina Brooks	Morgantown	S. S. Methods
Elsey, Rebecca Faith	Amboy	Summer School
Erd, Elsie Gwynneth Josephine	Morgantown	Physical Trainir
Evans, Phyllis Miriam	Morgantown	Physical Trainir
Evans, Robert Wilson	New Cumberland	Special Prep.
Exley, Arthur Alison	Morgantown	Music
Faherty, Mary Josephine	Piedmont	Summer School
Fast, Josephine	Morgantown	Music
Felton, Albert	Davis	3rd Year Prep.
Field, Helen Preston	Morgantown	Music
Field, Mary Lillian	Morgantown	Physical Trainir
Fife, Frances Elizabeth	Morgantown	Physical Trainir
Finberg, Beatrice	Morgantown	Physical Traini
Finberg, Harold	Morgantown	Music
Finberg, Leonore Dorthy	Morgantown	Physical Traini
Fisher, Marie Antoinette Schley	Morgantown	S. S. Methods
Fisher, William Alven	Sherrard	Agr. Ex. S.
Fleming, Pauline	Morgantown	Physical Traini

Fleming, Ruth Sprague	Morgantown	Physical Training
Foreman, Earnest Weber	Martinsburg	Commercial
Foreman, Maucealeene	Morgantown	Music
Forman, Hattie Estelle	Grafton	Summer School
Forquer, Callie	Brandonville	Music
Fortney, Hugh Goff	Lumberport	1st Year Prep.
Foulk, Thomas Bond	Morgantown	Music
Fowler, Nelle Hyacinthe	Harrisville	Summer School
Freeman, William Blain	Salem	1st Year Prep.
Frei, Edna Elizabeth	Green Hill	Summer School
Freshwater, Charles	Walker	Summer School
Fry, Mildred Elsie	Morgantown	Physical Training
Fry, Ruth	Morgantown	2nd Year Prep.
Furman, Cecyle Mayme	Cassville	Music
Gambrill, Elizabeth Charles	Parkersburg	Summer School
Gandy, Mary	Terra Alta	Summer School
Garlow, Sara Ruth	Morgantown	Music
Garner, Lawrence Henry	Moundsville	Summer School
Garrison, Brown Reid	Morgantown	Commercial
Garrison, Lillian Knight	Morgantown	Music
Garrison, Norman Morris	Morgantown	4th Year Prep.
Garum, Daniel Milroy	Sherrard	Agr. Ex. S.
Gaskill, Bertha Fern	Montana Mines	Music
Gaskill, Virginia	Fairmont	Summer School
Gatts, Daisy Marie	Moundsville	Summer School
Gibbons, Teresa	New Martinsville	Summer School
Gilmore, Jean Esther	St. Cloud	Music
Gilmore, Virginia	Morgantown	Physical Training
Ginkel, Iva Elenora	Morgantown	Music
Gist, Russell Henderson	Wellsburg	3rd Year Prep.
Gist, Maria Anna	Wellsburg	4th Year Prep.
Given, Ida Susan	Wade	Summer School
Glasscock, Mabel Reynolds	Morgantown	Music
Glenn, Kate Rachel	Morgantown	Music
Glenn, Mary Jane	Morgantown	Music
Glover, John Franklin	Morgantown	1st Year Prep.
Glover, Julia Virginia	Morgantown	Art
Goetze, Charles	Sherrard	Agr. Ex. S.
Goff, Eustace	Juna	Summer School
Goodrich, William Jay	Sistersville	Summer School
Gorman, Karl Hartman	Morgantown	2nd Year Prep.
Goudy, Charles Thoburn	Sherrard	Agr. Ex. S.
Gould, Freeman Earl	Farmington	1st Year Prep.
Gould, Lydia	Buckhannon	Summer School

Gould, Mary Pearle	Buckhannon	Summer School
Gould, Myra	Buckhannon	Summer School
Graham, Martha Virginia	Wheeling	S. S. Methods
Gregg, John Morton, Jr.	Morgantown	Music
Gregg, Lucile Chase	Morgantown	Music
Griffith, Clayton William	Gary	1st Year Prep.
Grimm, Homer Willard	St. Marys	4th Year Prep.
Grimm, Nellie Marsh	St. Marys	Music
Grose, James Morthmore	Morgantown	S. S. Methods
Grose, Nancy Virginia	Morgantown	Summer School
Grove, Roy	Martinsburg	1st Year Prep.
Grove, Artie Russell	Cuzzart	1st Year Prep.
Groves, Charles Arthur	Pittsburg, Pa.	Commercial
Groves, Elverta	Earl	Summer School
Guseman, Gladys Anna	Morgantown	4th Year Prep.
Guseman, Sadie Ray	Morgantown	4th Year Prep.
Guthrie, James Kuykendall	Romney	4th Year Prep.
Hackney, Lillian Grey	Morgantown	Physical Training
Hagan, Fiatta Matilda	Hero, Pa.	Music
Hale, Ruth Regina	Weston	Summer School
Hall, Ella Leila Bent	Morgantown	Physical Training
Hall, Golda Elizabeth	Morgantown	Physical Training
Hall, Margaret	Marion	Summer School
Hall, Viola Myrtle	Morgantown	Commercial
Hamill, Clement Hepburn	Elkins	Summer School
Hamilton, Claude Dewis	Morgantown	4th Year Prep.
Hamilton, Florence Ethel	Grafton	Summer School
Handley, Robert Arbuckle	Lewisburg	Special
Hanford, James Lawrence	Morgantown	1st Year Prep.
Hanford, Josephine	Morgantown	Music
Harbert, Guy Morlan	Shinnston	Special Prep.
Harden, Hattie	Bristol	Summer School
Hardesty, Ocie Sadie	Mannington	Music
Hardesty, Mearle Ellen	Morgantown	Physical Training
Hardman, William Lawson	Surveyor	S. S. Methods
Hare, James Franklin	Morgantown	Commercial
Harris, Emma Mae	Glen Easton	Music
Harris, Grace	Harrisville	Summer School
Harris, Kate Innes	Parkersburg	Summer School
Harless, James Isaac	Cyclone	Summer School
Harless, Lorenza Dow	Swope	Summer. School
Harman, Ida Grace	Macksville	Summer School
Harman, Ray Gordan	Richwood	Special Prep.
Hart, Lulu Clare	Wheeling	S S. Methods

Hartley, Alice Katharine	Piedmont	Summer School
Hartman, Arlett Bryan	Morgantown	Music
Hartman, Jessie Marguerite	Burnt House	Summer School
Haught, Jackson Corothers	Wadestown	1st Year Prep.
Hayhurst, Zelma Isabel	Parkersburg	Summer School
Haymond, Mabel Shaffer	Morgantown	Commercial
Hazlett, George	Sherrard	Agr. Ex. S.
Heenan, Sarita Florice	Morgantown	Physical Training
Heenan, Minnie Round	Morgantown	S. S. Methods
Heflin, Neal Minter	Grafton	4th Year Prep.
Heinzman, Elizabeth	New Martinsville	Summer School
Heltzen, John Guthrie Luke	Davis	2nd Year Prep.
Hennen, Cora Hagan	Morgantown	Music
Henry, Guy Alexander	Morgantown	1st Year Prep.
Hepburn, Carrie	Piedmont	Summer School
Hepburn, Margaret	Lonaconing, Md.	Summer School
Hepburn, Nannie Katharine	Piedmont	Summer School
Hepburn, Viola	Lonaconing, Md.	Summer School
Herndon, Nettie Southworth	Terra Alta	Summer School
Herald, Andrew Bernard	Cincinnati, Ohio	Music
Herron, Bernard Leonard	Monessen, Pa.	Summer School
Herron, Thomas Basil	Monessen, Pa.	Summer School
Hickman, Georgia Estelle	Fairmont	Music
Hickman, Lenore Dudley	Parsons	Summer School
Hirschman, Simon Vincent	Morgantown	Music
Hicks, Lutie	Wheeling	S. S. Methods
Hinds, Holman Blaine	Rockwood, Tenn.	1st Year Prep.
Hinton, Ethel	Hinton	Summer School
Hodges, Eliza Pearl	Morgantown	Music
Hodges, Grace Mabelle	Morgantown	Music
Hodges, Harold Grey	Buckhannon	Special Prep.
Hoffman, Katharine	Wabash, Ind.	Summer School
Hogg, Robert Lynn	Morgantown	Commercial
Hogg, William Bennett	Morgantown	Music
Hogsett, Cora Alecie	Fair Plain	Commercial
Holbert, Clyde Pendleton	Jane Lew	Special Prep.
Holroyd, Ella Lively	Athens	Music
Holroyd, Mary Manning	Athens	Summer School
Hormell, Duane Cuzens	Morgantown	1st Year Prep.
Hood, Lucie Leah	Wheeling	Summer School
Hood, Zella	Lahmansville	Commercial
Hopkins, Roberta	Charleston	Summer School
Hopwood, Jane Clyde	Morgantown	Special Prep.
Hopwood, Julia	Morgantown	Art

Hopwood, Mary Katharine	Morgantown	1st Year Prep.
Hoskins, Stephen Paul	Weston	3rd Year Prep.
Hough, Ethel Rebecca	Morgantown	Music
Houston, Georgia Carroll	Morgantown	Commercial
Howard, Opal Flodell	Cameron	Summer School
Hoylman, Joseph Newton	Bramwell	Summer School
Hubbs, George Emanuel	Cameron	Summer School
Huey, Glen Hamilton	Mannington	3rd Year Prep.
Hughes, Audry	Jane Lew	Summer School
Hughes, Fannie	Jane Lew	Summer School
Hughes, Mary	Ben Lomond	Summer School
Hughes, Nellie	Ben Lomond	Music
Humphreys, Ira Dwight	Organ Cave	Agr. Ex. S.
Hurxthal, Christine	Morgantown	1st Year Prep.
Hutzler, Isadore	Parkersburg	Summer School
Ireland, Addie Rosalie	Morgantown	Summer School
Ice, Jessie	Graysflat	Summer School
Inks, Estella Margret	Morgantown	Commercial
Isner, Carl Arthur	St. Marys	S. S. Methods
Jackson, Elmer Nickell	Fort Spring	Agr. Ex. S.
Jacobs, Virginia	Morgantown	Art
Jamison, Jessie Lee	Morgantown	Music
Jeffries, Elmer Woodward	Uniontown, Pa.	Summer School
Jenkins, Jesse J.	Uffington	2nd Year Prep.
Jenkins, Jessie	Montrose, Pa.	Physical Training
Johnson, Effie Maud	Burning Springs	Summer School
Johnson, John B.	Queens Ridge	1st Year Prep.
Johnson, Kate	Bluefield	Summer School
Johnson, Lucian Dale	Uniontown, Pa	4th Year Prep.
Johnson, Robert Sitlington	Fort Spring	Agr. Ex. S.
Johnson, Salome Elizabeth	Hinton	Summer School
Johnson, Sue Montgomery	Keyser	Summer School
Johnson, Virgie Vienna	Bluefield	Summer School
Johnston, Mamie	Pearisburg, Pa.	Summer School
Jolliffe, Grace	Anthem	Music
Jones, Goldie Leona	Morgantown	Music
Jones, Treoor Morris	Morgantown	Music
Jordan, Clara Huffman	Frost	Summer School
Joseph, Nelle Ethyl	Morgantown	Music
Keck, Leonidas Virginius, Jr.	Morgantown	1st Year Prep.
Keenan, Frances	Glover Gap	Summer School
Keenan, Marl	Bowlby	3rd Year Prep.
Keever, Carrie Rowena	Belleville	Summer School
Keffer, Hazel Genevieve	Connellsville, Pa.	Summer School

Keighron, Hazel Margaret	Morgantown	Summer School
Keller, Joseph	Middlebourne	Summer School
Kelley, Edna Marguerite	Morgantown	Art
Kelley, Mary	Davistown, Pa.	Art
Kelts, Burt Monroe	Richwood	Commercial
Kemp, Walter William	Captima	Summer School
Kemper, Esta Fruemen	Freemansburg	1st Year Prep.
Kennedy, James Walter	Hundred	1st Year Prep.
Kenyon, Carrie Cochran	New Haven, Pa.	Summer School
Kerr, Isabel Jean	Central City	Summer School
Keys, Charles Clarence	Clarksburg	Summer School
Kiger, Ada Beatrice	Morgantown	Music
Kiger, Pearl Randolph	Sherrard	Special Prep.
Kincaid, Kathyn Emelia	Morgantown	Music
Kinsey, Jackson Clyde	Morgantown	Music
King, John Talbert	McMechen	Summer School
King, Fiorence	Parkersburg	Music
Kislig, Charles	New Martinsville	3rd Year Prep.
Kittle, William Martin	Sherrard	Agr. Ex. S.
Klingel, Allen Eugene	Morgantown	Music
Klingel, Nellie Cleyone	Morgantown	Music
Knapp, Mary Gray	Morgantown	4th Year Prep.
Kyger, William Rolly	Parkersburg	S. S. Methods
Kyle, Elizabeth Gertrude	Wheeling	S. S. Methods
Laracuenta, Augusto	San German, Porto Rico	1st Year Prep.
Larkin, Florence Eleanor	Philippi	Summer School
Larue, Esther Madeline	Morgantown	Music
LaRue, Ethel May	Morgantown	Music
LaRue, Margaret Rebecca	Academy	Summer School
Lastra, Alfonso	Yabucoa, Porto Rico	Summer School
Layman, Florence May	Baltimore, Md.	Summer School
Layton, Lulu Eugenia	Morgantown	Music
Lazell, Neta Blanche	Morgantown	Art
Lazzelle, Donald Grant	Morgantown	Music
Lazelle, Cecelia Mabel	Morgantown	Physical Training
Leatherman, Belle Virginia	Bridgeport	Summer School
Lee, Mabel	West Milford	Summer School
Legg, Vincent	Clifty	Commercial
Lemley, Dallah	Morgantown	Physical Training
Lentz, Ethel Kathryn	Parsons	Summer School
Lester, Rufus	Fort Gay	Summer School
Lewellen, Lawrence Seaman	Spencer	Commercial
Lohr, Grace	Mt. Pleasant, Pa.	Summer School
Long, Pearl	Parsons	Summer School

Long, Washington Jackson	Beverly	Summer School
Lynch, Bertha Magdalene	Fairmont	S. S. Methods
Mackey, Anna Elizabeth	Morgantown	Physical Training
MacRae, John Alexander	Mannington	3rd Year Prep.
Madden, Cecile Leona	Vegan	Summer School
Madera, Emil Earl	Morgantown	Music
Madigan, Jessie Bridget	Morgantown	Music
Manley, Laura West	Fairmont	S. S. Methods
Manning, Annie Lee	Baltimore, Md.	Summer School
Marlowe, Hulda	Parkersburg	Summer School
Marple, John Blaine	McMechen	3rd Year Prep.
Martin, Alta	Shinnston	Summer School
Martin, Maude Myrtle	Athens	Summer School
Martin, Roy Jehu	Grafton	Summer School
Martz, Gordie Elsie	Buckhannon	Summer School
Matheny, William Riley	Mannington	Summer School
Mathias, Floyd Branson	Mathias	1st Year Prep.
Matthews, Sadie Beatrice	Chester	Summer School
Mattingly, Ella Gertrude	Morgantown	Music
Mattson, Ellen	Morgantown	Music
McCleary, Arthur Vincent	Sherrard	Agr. Ex. S.
McCleary, Grace	Woodruff	Summer School
McClung, Bonnie Lee	Reedy	Music
McClung, Harriet Wyatt	Huntington	Summer School
McCombs, Charles Kimpl	Sherrard	Agr. Ex. S.
McCombs, Edgar Woods	Sherrard	Agr. Ex. S.
McCombs, Mary Caldwell	Moundsville	Summer School
McConnell, Albert Russell	Sherrard	Agr. Ex. S.
McCreery, Nancy Jane	Morgantown	Physical Training
McCune, Ralph Edwin	Broomfield	3rd Year Prep.
McCurdy, Linnie Lucile	Parkersburg	Summer School
McDaniel, Forrest Millan	Kingwood	4th Year Prep.
McDonald, Brown	Sycamore	3rd Year Prep.
McDonald, Orville Lowe	Bridgeport	4th Year Prep.
McDougal, Ora	Pennsboro	Summer School
McFadden, Laura Wishart	Moundsville	Summer School
McGranahan, Elizabeth Baker	Wheeling	S. S. Methods
McGranahan, Marie Arabella	Wheeling	S. S. Methods
McGucken, Anna	Bancroft	Summer School
McIntyre, Mont	New Martinsville	Commercial
McKay, Catherine Mary	Parkersburg	Summer School
McKinney, Rose	Fairmont	Summer School
McKnight, William Enoch	Winfield	Summer School
McMillen, Harvey Henry	Masontown	Summer School

McNeill, Genevieve	Morgantown	Music
McNemar, Joseph Vincent	Lahmansville	Summer School
McNemar, William Vernon	Lahmansville	4th Year Prep.
McNutt, Raymond Campbell	Sinks Grove	Agr. Ex. S.
McVicker, John Morgan	Volga	Summer School
Meade, George Whitfield	Pittsburg, Pa.	S. S. Methods
Meadows, Charles William	Charleston	Summer School
Mealy, Frederick Earle	Morgantown	Music
Menear, Walter	Tyrconnell	Summer School
Meredith, Melvin Applegate	Huntington	3rd Year Prep.
Mestrezat, Mary Helen	Morgantown	Music
Milam, William Harrison	Fry	1st Year Prep.
Miller, Alexander	Morgantown	4th Year Prep.
Miller, John Leman	Claysville, Pa.	4th Year Prep.
Miller, Harry Irving	Morgantown	1st Year Prep.
Miller, Lois Evalyne	Morgantown	Physical Training
Miller, Mary Belle	Morgantown	Physical Training
Miller, Moses Otto	Independence	2nd Year Prep.
Miller, Roy Brooks	Morgantown	Music
Miller, Virginia Baker	Morgantown	Physical Training
Mitchell, John Barton	Scenery Hill, Pa.	Special Prep.
Moffatt, Benjamin Harrison	Shinnston	1st Year Prep.
Moore, Beryl Chase	Parkersburg	Summer School
Moore, Dora	Parkersburg	Summer School
Moore, Elizabeth Irwin	Morgantown	S. S. Methods
Moore, Lela	Moundsville	Summer School
Morgan, Frank Madera	East Pittsburg, Pa.	Commercial
Morgan, Pleasant Merle	Alexander	Summer School
Morse, Ann Eliza	Eaton, N. Y.	Summer School
Moser, Lloyd Lawhead	Smithfield, Pa.	Summer School
Muldoon, Harry Ross	Morgantown	Special Prep.
Mumm, Mary Jane	Pekin, Md.	Summer School
Murphy, Frank Edward	Marion, Ohio	1st Year Prep.
Musick, Rufus M.	Williamson	Special Prep.
Musselman, Hugh Thomas	Philadelphia, Pa.	S. S. Methods
Musser, Junius	Adamston	Summer School
Myers, Nettie Nancy	Parkersburg	Summer School
Neil, Esta Mae	Clay	Summer School
Negron, Ramon, Jr.	Humacao, Porto Rico	Summer School
Nestor, Charles Wallace	Hooversville, Pa.	Commercial
Nestor, Silas James	Hovatter	Summer School
Newton, Douglas Everett, Jr.	Hartford	2nd Year Prep.
Nicholls, Adele Emilia	Star City	Music
Norman, Elsie Mae	Spencer	Commercial

Nurnberger, Joseph Samuel	St. Albans	1st Year Prep.
Nuzum, Callie	Clarksburg	Summer School
Nuzum, Myrtle	Grafton	Summer School
O'Kelley, Fielding Kiger, Jr.	Morgantown	Commercial
Orum, Joseph	Sherrard	Agr. Ex. S.
Palmer, Lena Esther	Morgantown	Music
Parker, Edith	Mona	Music
Parker, Errie R.	Fairmont	Summer School
Parker, George	Morgantown	Music
Parks, William Shore	Fairmont	Summer School
Pastorius, Viola May	Morgantown	Physical Training
Patterson, James Howard	Sutton	Summer School
Patterson, Richard	Morgantown	Music
Pearcy, Ethel Pauline	New Milton	Special Prep.
Pearson, Frank Roy	Martinsburg	2nd Year Prep.
Pease, Melvin Jesse	Capon Bridge	1st Year Prep.
Pedicord, Harry Lewis	Wheeling	Summer School
Pelkey, Ellis David	Sherrard	Agr. Ex. S.
Peters, Winslow William	Mauch Chunk, Pa.	4th Year Prep.
Peters. William Frances	Brick Church, Pa.	1st Year Prep.
Phillips, George Francis	Belington	3rd Year Prep.
Phillips, Maud Beryl	Morgantown	Commercial
Prichard, David Farrar	Scottdale, Pa.	4th Year Prep.
Poling, Marie Ward	Fairmont	Music
Porter, Harvey Devney	Wise	1st Year Prep.
Porter, Sarah Belle	Moundsville	S. S. Methods
Potter, Nellie Blanche	Morgantown	1st Year Prep.
Powell, Martha Virginia	Morgantown	Physical Training
Preston, Harry	Morgantown	Music
Price, Mildred Louise	Morgantown	Music
Price, Otella Beatrice	Morgantown	Art
Price, William Logan	Uffington	2nd Year Prep.
Prickett, Clarence James	Fairmont	Special Prep.
Prickett, Mary	Fairmont	Summer School
Pritchard, William Edward	Bramwell	4th Year Prep.
Protzman, Belle	Morgantown	1st Year Prep.
Purinton, Helen Elizabeth	Morgantown	4th Year Prep.
Quinn, Elizabeth Scott	Mingo Junction, O.	Music
Radabaugh, Daisy	Hinkle	Summer School
Radabaugh, David Adam	Hall	1st Year Prep.
Ramsey, Ora Belle	Morgantown	Commercial
Raspillaire, Emile Alfred	Morgantown	Music
Rector, Josephine	Parkersburg	Summer School
Reed, Bessie Jane	West Alexander, Pa.	4th Year Prep.

Reeves, Daise	Morgantown	Commercial
Reid, Boswell B.	Morgantown	S. S. Methods
Reid, Roswell	Star City	Music
Reinwald, Minnie	Huntington	Summer School
Reppert, Fred Gilson	Uffington	1st Year Prep.
Rice, Granville James	Big Bend	1st Year Prep.
Riddell, Nellie Bly	Wheeling	Summer School
Ridgway, Frances Marie	Morgantown	Physical Training
Ridgway, Nellie Louise	Morgantown	Physical Training
Riegner, Minnie Caroline	Chambersburg, Pa.	Summer School
Rife, Oscar Jennings	Wayne	Summer School
Riggs, Howard Charles	St. Marys	4th Year Prep.
Rightmire, Beulah	Morgantown	Art
Riley, Edith Grace	Chester	Summer School
Roat, Mabel Agnes	Kingston, Pa.	Music
Robinson, James	Claxton, Ga.	1st Year Prep.
Rodgers, Sidney Burton	Sinks Grove	Agr. Ex. S.
Rogers, Dora Belle	Parkersburg	Summer School
Rogers, Mary Washington	Morgantown	Music
Rogerson, J. F.	Sherrard	Agr. Ex. S.
Rohr, Kramer Jackson	Morgantown	S. S. Methods
Ross, May Darling	Morgantown	Art
Rowley, Romana	Ravenswood	Summer School
Russell, Bessie	Perryopolis, Pa.	Summer School
Russell, Lillian	Morgantown	Physical Training
Russell, Mollie Martha	Morgantown	Physical Training
Ryan, Charles Calvin	Smithfield, Pa.	4th Year Prep.
Salsberg, Esther	Morgantown	Physical Training
Salsberg, Hilda	Morgantown	Physical Training
Sayre, Val	Elizabeth	Summer School
Scohy, Emma	Morgantown	Music
Scott, Bessie Catherine	Morgantown	Music
Scott, Lessye Orpha	Masontown	Summer School
Seabright, William Harrison	Elm Grove	Agr. Ex. S.
Seaton, Alma	Mt. Pleasant, Pa.	Summer School
Selby, Mildred Virginia	Morgantown	Physical Training
Semans, Mary Ruth	Morgantown	Physical Training
Shafer, Charles Thomas	New Salem, Pa.	Summer School
†Shafer, William Clement	Wheeling	S. S. Methods
Shaver, Joseph Sheridan	Rowlesburg	Summer School
Shaver, Lelia Carrie	Rowlesburg	Summer School
Shaw, Bess Ethel	Moundsville	S. S. Methods

† Deceased.

Shelby, Minerva	Morgantown	1st Year Prep.
Shinn, Catherine	Shinnston	Summer School
Shreve, John Clyde	Burchfield	Summer School
Shriver, Forest Oral	Morgantown	3rd Year Prep.
Shriver, Herschel Lasure	Star City	1st Year Prep.
Shriver, Verella May	Morgantown	Music
Shumate, Sallie Louise	Athens	Summer School
Shuttlesworth, Jessie Edith	Morgantown	Art
Shuttlesworth, Lucy Adaline	Morgantown	Music
Shuttlesworth, Mary Letitia	Morgantown	Music
Sigler, John Morgan	Schultz	3rd Year Prep.
Sigley, Cloyd	Tunnelton	Summer School
Sigwart, Bertha	Morgantown	Physical Training
Simmons, Lois Florence	Morgantown	Music
Simpson, William Elbert	West Union	2nd Year Prep.
Six, Maud Edna	St. Cloud	Music
Smith, Daisy	Hundred	Summer School
Smith, Florence Anna	Morgantown	Music
Smith, Fred Manning	Charleston	4th Year Prep.
Smith, Frederick Denman	Berkeley Springs	Summer School
Smith, French Napoleon	Red Creek	1st Year Prep.
Smith, George Dolliver	Fairmont	S. S. Methods
Smith, Henry Lott	Martinsburg	Agr. Ex. S.
Smith, Lula Vivian	South Branch	Summer School
Smithson, Margaret Rucker	Richwood	Summer School
Snider, Clifford Raymond	Spencer	2nd Year Prep.
Snyder, Vena Jane	Morgantown	1st Year Prep.
Sonneborn, Henrietta	Morgantown	Music
South, Lulu Lenora	Bald Hill, Pa.	Commercial
South, Winifred Orienta	Morgantown	S. S. Methods
Spears, Ivan Reed	Wheeling	4th Year Prep.
Speer, Edgar Boyle	Uniontown, Pa.	4th Year Prep.
Spencer, Effie Beatrice	Parkersburg	Summer School
Spencer, Ida Isadore	Parkersburg	Summer School
Springer, Adah	Flemington	Summer School
Stark, Okey M.	Belleville	Summer School
Stathers, George B.	Alma	S. S. Methods
St. Claire, Linnie Bruce	Morgantown	1st Year Prep.
Stealey, John B.	Clarksburg	1st Year Prep.
Steele, Mary Pearl	Morgantown	Special Prep.
Steele, Sarah Gertrude	Morgantown	Physical Training
Stemple, Minnie Frances	Morgantown	Art
Stenger, Louis William	Morgantown	Summer School
Stewart, Hubert	Morgantown	Music

Stewart, Lois Allen	St. David, Ar.	Summer School
Stewart, Musette Beryl	Mannington	Music
Stillwagon, Ida Belle	Connellsville, Pa.	Summer School
Stoetzer, Mabel Irene	Parkersburg	Summer School
Stoker, Earl Price	Morgantown	Music
Stoker, Isabel Florence	Morgantown	Music
Stone, Helene Louise	Morgantown	Music
Stout, Dora Delilah	Clarksburg	Music
Stout, Josie Laurine	Clarksburg	Art
Strakey, Thomas Lee	Freemansburg	Summer School
Stryker, June	Morgantown	Art
Sturgiss, Joseph Eugene	Morgantown	Special Prep.
Sturgiss, Katharine	Morgantown	Physical Training
Swisher, Silas Newton	Morgantown	S. S. Methods
Sydenstricker, Carl Raymond	Morgantown	3rd Year Prep.
Sydenstricker, Lawrence Elbert	Morgantown	3rd Year Prep.
Tabler, Arthur Raymond	Martinsburg	3rd Year Prep.
Talbert, Oscar D.	Sherrard	Agr. Ex. S.
Taylor, George Edmond	Morgansville	3rd Year Prep.
Taylor, Martha Ellen	Bridgeport	Summer School
Tennant, Hattie Luella	Morgantown	Music
Tharp, Carrie Belle	Harrisville	Music
Thistle, Bertha	Morgantown	Summer School
Thistle, Mamie	Morgantown	Summer School
Thomas, Janet Ann	Morgantown	Commercial
Thomas, Mary Eleanor	Bula	1st Year Prep.
Thompson, James Dewitt	Morgantown	Special Prep.
Thompson, James	Uffington	1st Year Prep.
Tibbets, Eva Marie	Piedmont	Summer School
Tibbs, Mary	Morgantown	1st Year Prep.
Toynbee, Carrie Sarah	Morgantown	Physical Training
Tracewell, Leona May	Parkersburg	Summer School
Tracy, Dora Belle	Flemington	Summer School
Tracy, Frank	Flemington	Summer School
Tracy, Nannie	Woodsfield, Ohio	Summer School
Tregellas, John Leland	Grafton	4th Year Prep.
Treibler, Marion Dothea	Baltimore, Md.	Summer School
Treutle, Vivan Loresta	Rowlesburg	Summer School
Trotter, Martha Elizabeth	Morgantown	Physical Training
Trumbull, Charles G.	Philadelphia, Pa.	S. S. Methods
Tucker, Mary Esther	Cassville	1st Year Prep.
Tuckwiller, Eugene Anthony	Morgantown	Music
Tuckwiller, Rachel	Morgantown	Music
Turner, James Jackson	Morgantown	Commercial

Updike, Ernest Hampton	Morgantown	2nd Year Prep.
Utt, Sue	Morgantown	Commercial
Van Vlack, Della Marion	Chester	Summer School
Wade, Charlotte Esther	Mt. Morris, Pa.	Summer School
Wade, Georgia Chorpening	Morgantown	Music
Wade, Horace Alexander	Mt. Morris, Pa.	1st Year Prep.
Wade, May Laughead	Morgantown	Commercial
Wade, Zoe Florence	Fairmont	Summer School
Wallman, Joanna	Morgantown	Summer School
Wambaugh, Olive Mae	Morgantown	Music
Wamsley, Lena	Parsons	Summer School
Warrick, Edith Gretchen	Morgantown	Music
Warrick, Theodore Dunlap	Morgantown	Music
Waters, Ruby Belle	Morgantown	Art
Watkins, Wilbur Whally	Elm Grove	1st Year Prep.
Weaver, George Filmore	Morgantown	Commercial
Weaver, Jessie Beryl	Morgantown	Art
Weaver, Lula May	Morgantown	Art
Weaver, Mabel Jane	Morgantown	Music
Weaver, Noel Price	Morgantown	Commercial
Wees, Luther Stemple	Elkins	Summer School
Wells, Harry Lionell	Morgantown	Commercial
Weltner, Fred Paul	Brandonville	2nd Year Prep.
Weltner, Nellie Jeannetta	Morgantown	Music
Welton, Alice Virginia	Piedmont	Summer School
West, Helen Elizabeth	West Union	S. S. Methods
West, James Samuel	West Union	S. S. Methods
West, Mollie Christine	Hanna	Summer School
Whetsell, Mabelle Elenor	Morgantown	Music
White, Carrie	Weston	S. S. Methods
White, Dotia	Weston	Summer School
White, Florence Helen	Grafton	Summer School
White, Frank S.	Morgantown	Special Prep.
White, Lawrence Clermont	Parkersburg	Summer School
Whitham, Rachel Elizabeth	Morgantown	Art
Whooley, Frank Bannon	Smithfield, Pa.	Summer School
Wildman, Cora Blake	Lowsville	1st Year Prep.
Wildman, Simon Luther	Morgantown	S. S. Methods
Wiles, May	Williamson	Summer School
Wiley, Margaret Alta	Cameron	Summer School
Williams, Charles Everett	Blandville	Summer School
Williams, Edgar	Morgantown	3rd Year Prep.
Williams, Gladys	Morgantown	Music
Williams, Janet	Morgantown	Physical Training

Williams, Joseph Allen	St. Albans	Special Prep.
Williams, Mary Margaret	Morgantown	Physical Training
Williams, Mary Thomas	Ronceverte	Summer School
Willis, Martha Jane	Morgantown	Physical Training
Wilson, Chape	Burnt House	Summer School
Wilson, Clara Rowand	Fairmont	Summer School
Wilson, Cora	Belington	Summer School
Wilson, Effie Pearl	Parkersburg	Summer School
Wingrove, Allene	Morgantown	Physical Training
Winter, Bessie Pearl	Morgantown	2nd Year Prep.
Winter, Frances Elizabeth	Core	Music
Withers, A. B.	Bridgeport	S. S. Methods
Wolf, Gertrude	Morgantown	Music
Wolfe, Ethelyn Elizabeth	Morgantown	Commercial
Wolfe, Evelyn Maude	Morgantown	Commercial
Wolf, Maude Myrtle	Mt. Clare	Summer School
Woodford, Bessie	Morgantown	Art
Woodhull, Robert Mott	Morgantown	Special
Woodyard, Lena	Grafton	Summer School
Woofter, Orvilla	Shinnston	S. S. Methods
Yager, Barbara Joanna	Wheeling	Music
Ybern, Raymond	Calo Rojo, Porto Rico	Special Prep.
Yoke, French Arlington	Morgantown	3rd Year Prep.
Yost, Ellis Asby	Morgantown	S. S. Methods
Young, George Newton	Princeton	Summer School
Zellers, Jeannette Eliza	Morgantown	Physical Training
Zinn, Rosetta	Philippi	Summer School

THE UNIVERSITY SCHOOLS—SUMMARY OF ENROLLMENT, 1908-9

(As reported May 1, 1909)

	Male	Female	Total
Music	20	116	136
Fine Arts	..	20	20
Commercial	22	24	46
*Summer School	63	191	254
†School of Methods	23	25	48
Physical Training	..	52	52
Agricultural Extension	27	2	29
Preparatory School	145	27	172
Total	300	457	757

* The total enrollment in the Summer School including those re-enrolled later in some other college or school was 420.

† The total enrollment in the School of Sunday School Methods including those re-enrolled in some other college or school was 205.

ENROLLMENT BY STATES

West Virginia	679
Pennsylvania	47
Maryland	7
Porto Rico	5
Ohio	5
Indiana	2
New Jersey	2
New York	2
Arizona	1
California	1
Georgia	1
Illinois	1
Massachusetts	1
Tennessee	1
Washington, D. C.	1
Canada	1
Total	757

SUMMARY OF STUDENTS ENROLLED IN WEST VIRGINIA UNIVERSITY FOR THE YEAR 1908-9

	Male	Female	Total
College of Arts and Sciences	139	111	250
College of Engineering	103		103
College of Agriculture	81	2	83
College of Law	127		127
College of Medicine	18		18
School of Music	20	116	136
School of Fine Arts		20	20
Commercial School	22	24	46
Summer School	63	191	254
Physical Training		52	52
School of Sunday School Methods	23	25	48
Agricultural Extension Schools	27	2	29
Preparatory School	145	27	172
Total	768	570	1338

ENTIRE ENROLLMENT OF UNIVERSITY FACULTY FOR THE YEAR 1908-9

Professors emeritus	2
Professors	36
Associate professors	5
Assistant professors	5
Instructors	13
Assistants	11
Library staff	5
Epperiment Station staff	11
Total	88

INDEX---Part I

Accredited preparatory schools, 30
Admission, 33
Admission, requirements for:
  College of Agriculture, 150
  College of Arts and Sciences, 47
  College of Engineering, 114
  College of Law, 167, 168
  College of Medicine, 182, 184
  Military Department, 191
Advanced standing, 35, 115, 168
Agency, 171
Agricultural extension work, 154
Agriculture, 59, 154
Agriculture, certificate course in, 152
Agriculture, College of, 148
Agriculture, short courses in, 153
Agriculture, special winter course in, 154
Aid for students, 43
Alumni associations, 204
Anatomy and physiology, 59, 187, 188, 190
Animal husbandry, 157
Astronomy, 95
Armory, 192
Arts and Sciences, College of, 45
Athletics, 28
Bacteriology, 59, 158, 188
Bar examinations, 170
Bar students, 168
Boarding and rooming places, 30, 43
Botany, 59, 158
Bryan prize, 42
Buildings, 22, 26, 108
Cadet appointments, 194
Cadet band, 194
Cadet corps, 191
Cadet graduates, 196
Cadet roster, 197
Calendar, 4
Chapel exercises, 39
Chemistry, 61, 158, 187
Christian associations, 39
Civil engineering, 64, 116, 131
Classification of students, 36
Class officer, 34
Commencement speakers, 203
Committee on classification and grades, 33
Common law, 176
Constitutional law, 175
Convocation speakers, 203
Corporations, 175
Courses, maximum number of, 34
Court practice, 177
Criminal law, 174
Dairying, 158
Degrees:
  In the College of Arts and Sciences, 53
  In the College of Agriculture, 150
  In the College of Engineering, 112
  In the College of Law, 169
  In the College of Medicine, 182, 184
  Conferred in 1908, 200
Departments of Instruction:
  College of Arts and Sciences, 59
  College of Agriculture, 155
  College of Engineering, 131
  College of Law, 171
  College of Medicine, 186
Diagnosis, physical. 190
Diplomas:
  In agriculture, 152
  In law, 170
Discipline, 38
Doctor of Philosophy, 57
Drawing, 53, 76
Dulles' prizes, 42
Economics and sociology, 65
Education, 66
Electrical engineering, 119, 140
Elocution, 74
Embryology, 188
Engineering and Mechanic Arts, College of, 107
Engineering, Graduate courses in, 128
Engineering Society, 112
English, 48, 70
English language and literature, 71
Enrollment:
  Summary of, 221
  By states, 222

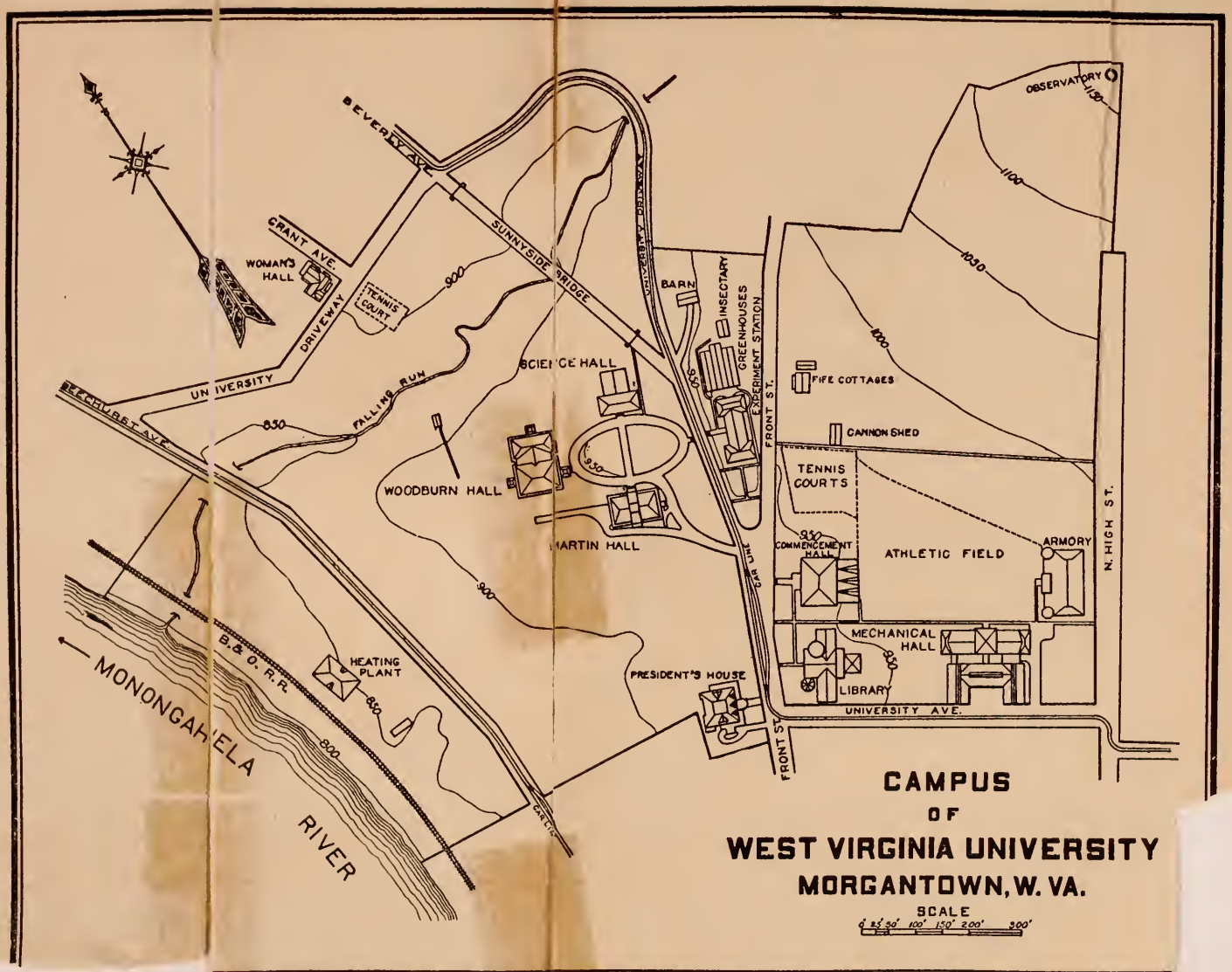
Entomology, 159
Entrance requirements, 33, 47
Equipment:
  In the College of Agriculture, 149
  In the College of Engineering, 108
  In the College of Medicine, 181
Equity, 175
Evidence, 174
Experimental engineering, 142
Expenses, 30
Faculty:
  College of Agriculture, 148
  College of Arts and Sciences, 45
  College of Engineering, 107
  College of Law, 166
  College of Medicine, 181
  University, 9
  Number in, 222
Fees, 29, 186
Fine Arts, 76
Forestry, 160
Foundation of University, 19
French, 50, 100
Funds, 25
General information, 38
Geology and mineralogy, 77
German, 50, 78
Government of the University, 21
Greek, 50, 82
Growth of the University, 22
Gymnasium, 28
Histology, 160, 190
Historical sketch, 19
History, 50, 84
Horticulture, 161
Insurance, 173
Inter-Society prize, 41
Italian, 104
Laboratories, 27
Latin, 49, 91, 93
Law, 94
Law, College of, 166
Law, Courses in, 172
Law library, 166
Library, 26
Library staff, 17
Location of the University, 25
Machine design, 136
Manual training courses, 130
Master of Arts, 55
Master of Science, 57
Mathematics, 51, 94
Matriculation, 33
Meat inspection, 162
Mechanic arts, 134, 162
Mechanical drawing and machine design, 136
Mechanical engineering, 95, 119
Mechanics and applied mathematics, 95, 143
Medical courses, 182, 183, 186
Medical jurisprudence, 189
Medicine, College of, 181
Milk inspection, 162
Military science and tactics, Department of, 190
Military science, Course in, 193
Mineralogy, 77
Mining engineering, 125, 145
Moot courts, 172
Morris prize in engineering, 42
Music, 95
Officers of the University, 7
Organization of the University, 25
Pathology, 160, 190
Pharmacology, 189
Philosophy, 96
Physical training, 28, 97, 193
Physics, 98, 163
Physicians, Special courses for, 186
Physicians and Surgeons, The Baltimore College of, 184
Physiology, 61, 189
Political science, 90
Prizes, 40, 202
Psychology, 96
Real property, 173
Recognized preparatory schools, 32
Regents' prizes, 41
Regents, The Board of, 6
Registration, scholarship, etc., Rules concerning, 33
Rhetoric, 70
Romance languages and literature, 103
Rules concerning admission, etc., 36
Schedules of studies:
  A.B. Course, 55
  B.S. Course, 55
  B.S.C.E. Course, 118
  B.S.M.E. Course, 123
  B.S.E.M. Course, 127
  Law, 171
  B.S. and M.D. Course, 183
  Four-Year Medical Course, 185
  Veterinary Course, 151
  Diploma Course in Agriculture, 152
Scholarship, 36
Science, 52
Societies, 39

Sociology, 66
Spanish, 103
Special courses, 113, 129
Special students, 35, 114
Standing committees, 8
Steam engineering, 138
Students, List of, 205
Tax Commission prize, 42
Teachers' Bureau, 44
Text-books, 179, 190
Theses, 38, 116
Thompson Company prize, The Edward, 41
Thompson prize in Anatomy, 41
Torts, 174
Tuition, Rates of, 29
University Council, 7
Veterinary science, 163
Woman's Hall, 42
Y. W. C. A. Self-help Committee, 43
Zoology, 104

INDEX---Part II

Accounting, 59
Administration and instruction.
officers of, 7
Admission requirements, 17, 31, 57, 65
Agriculture, 44
Agricultural Experiment Station, 76
Station staff, 13, 76
Board of Regents, 6
Botany, 43, 66
Buildings, 15
Calendar, 4, 5
Certificates in music, teachers', 17, 78
Chapter houses, 32
Chemistry, 45, 67
Choral society, 16
Chorus singing, 21
Clay modeling, 48
Civics, 72
Commercial school, 56
Committees, 8
Conference, Educational, 33
Convocation, Summer school, 33
Concerts and recitals, 16
Council, University, 7
Courses of study:
Art, 25, 26
Commercial school, 57
Music, 17, 52
Summer school, schedule of, 34
Departments of instruction:
Commercial school, 59
Preparatory school, 66
School of fine arts, 21
School of music, 19
Summer school, 36
Diplomas:
Awarded in 1908, 78
In commercial school, 57
In fine arts, 26
In music, 17
Domestic arts and sciences, 49
Education, 36
Educational conference, 33
English, 39, 67
Enrollment, summary of, 97
Ensemble playing, 21
Equipment:
School of fine arts, 25
School of music, 15
Faculty:
Of the university schools, 9
Preparatory school, 64
School of fine arts, 25
School of music, 15
Summer school, 11, 28
Sunday school methods, 30
Fine arts:
School of, 25
College credit for courses in, 26
Courses of instruction in, 26, 48
French, 47
Geography, Physical, 46, 74
Geology, 46
German, 70
Graduation requirements:
Commercial school, 57
School of music, 17
Greek, 71
History, 42, 72
Laboratories, 32
Latin, 47, 73
Law, 50
Library:
Of school of music, 15
Use of in summer school, 32
Library science, 49
Mathematics, 48, 73
Matin service, 32
Music:
College credit for courses in, 17
History of, 22
Public school, 22
Theory of, 22
School of, 15
Nature study, 43
Physical geography, 46, 74
Physical training, 75
Physics, 45, 74
Physiology, 75
Piano, 18, 19
Pipe organ, 21
Preparatory school, 64
Primary work and methods, 38
Prizes, 66
Public school drawing, 48
Public school music, 54
Recitals, 16, 32
Regents, Board of, 6

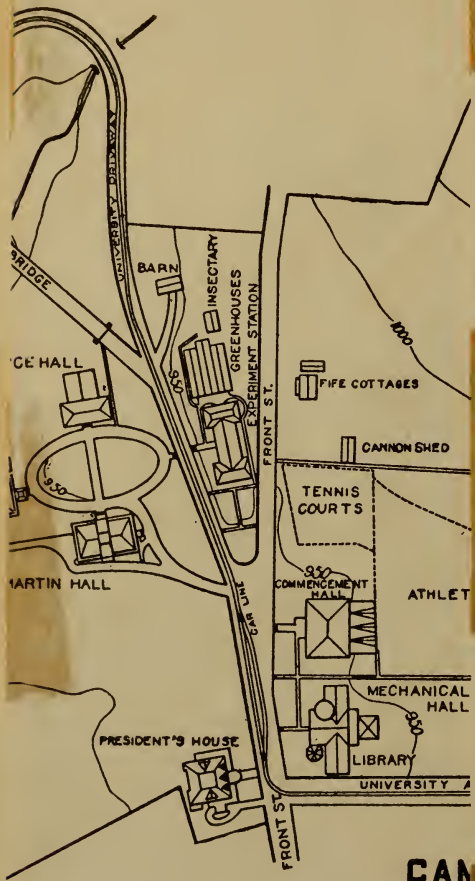
Requirements for admission:
Commercial school, 57
Preparatory school, 65
School of music, 17
Summer School, 31
Schedule of courses in summer school, 34
Societies, Literary, 66
Spanish, 48, 68
Statistical table, 98
Stenographic course, 58
Stenography, 62
Students, List of, 79
Sunday school methods, 55
Tuition rates:
Commercial school, 57
Preparatory school, 65
School of fine arts, 25
School of music, 23
Summer school, 31
Typewriting, 63
University council, 7
Violin, 18, 20
Vocal music, 18, 19
Woman's hall, 32
Wood and brass instruments, 21
Zoology, 75



CAMPUS OF WEST VIRGINIA UNIVERSITY MORGANTOWN, W. VA.

SCALE

0 25' 50' 100' 150' 200' 300'


BARN
INSECTARY
GREENHOUSES
EXPERIMENT STATION
FRONT ST.
BRIDGE
CE HALL
MARTIN HALL
FIFE COTTAGES
CANNON SHED
TENNIS COURTS
COMMENCEMENT HALL
ATHLET
CAR LINE
MECHANICAL HALL
LIBRARY
PRESIDENT'S HOUSE
UNIVERSITY
FRONT ST.
1000
950
900
CAM
WEST VIRGINI
MORGANT

WEST VIRGINIA UNIVERSITY

CATALOGUE
1909 - - - 1910

ANNOUNCEMENTS
1910 - - - - 1911

THE COLLEGES.

MORGANTOWN, WEST VIRGINIA
PUBLISHED BY THE UNIVERSITY

NEWS MAIL COMPANY, CHARLESTON, W. VA.

CONTENTS.

Calendar 4, 5

Board of Control and Board of Regents 6

Officers of Instruction and Administration 7

Historical Sketch of the University 20

Description of the institution 26

University fees and expenses 30

Accredited and recognized schools 32

Admission to the University 34

Scope of the Entrance Requirements 37

Rules governing Classification and Scholarship 43

General Information 46

College of Arts and Sciences 53

College of Engineering and Mechanic Arts 113

College of Agriculture 157

College of Law 179

College of Medicine 190

Department of Military Science and Tactics 202

Degrees, Diplomas and Prizes 210

Alumni Associations 215

List of Students 216

Summary of Enrollment 232

Index 234

CALENDAR FOR 1910, 1911, 1912.

1910

JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

1911

JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

AUGUST

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DECEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	[illegible]
17	18	[illegible]				

1912

JANUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

MARCH

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

APRIL

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
6	17	18	19	20	21	22
[illegible]	24	25	26	27	28	29

UNIVERSITY CALENDAR

1910

September 19, Monday.....Fall Quarter Begins
September 19, 20, 21, Monday, Tuesday, and Wednesday.....
..... Entrance Examinations
September 19, 20, 21, Monday, Tuesday, and Wednesday.....
.....Marticulation and Registration of Students
September 22, Thursday.....Recitations of Fall Quarter Begin
September 22, Thursday, 8:00 P. M.....Fall Convocation
November 24 to November 27.....Thanksgiving Recess
December 13, Tuesday.....Last Recitations of Fall Quarter
December 14, Wednesday, to December 16, Friday, inclusive....
.....Final Examinations of Fall Quarter
December 17, Saturday, to January 2, 1911.....Quarterly Recess

1911

January 3, Tuesday (Registration Day).....Winter Quarter Begins
January 4, Wednesday.....Recitations of Winter Quarter Begin
January 5, Thursday, 8 P. M.....Winter Convocation
February 22, Wednesday.....Washington's Birthday, a Holiday
March 21, Tuesday.....Last Recitations of Winter Quarter
March 22, Wednesday, to March 24, Friday.....
.....Final Examinations of Winter Quarter
March 24, Friday .....Winter Quarter Ends
March 25, Saturday, to March 27, Monday.....Quarterly Recess
March 28, Tuesday (Registration Day).....Spring Quarter Begins
March 29, Wednesday .....Recitations of Spring Quarter Begin
March 30, Thursday, 8 P. M.....Spring Convocation
May 30, Tuesday.....Memorial Day, a Holiday
June 6, Tuesday.....Last Recitations of Spring Quarter
June 7, Wednesday, to June 10, Saturday, inclusive.....
.....Final Examinations of Spring Quarter
June 14, Wednesday..... Commencement

STATE BOARD OF CONTROL.

JAMES S. LAKIN, President.....Charleston
THOMAS E. HODGES, Treasurer.....Charleston
JOHN A, SHEPPARD.....Charleston
L. V. REED, Secretary.....Charleston

STATE BOARD OF REGENTS.

M. P. SHAWKEY, President.....Charleston
J. B. FINLEY .....Parkersburg
GEO. S. LAIDLEY .....Charleston
M. C. LOUGH .....Fairmont
G. A. NORTHCOTT .....Huntington
P. W. MORRIS, Secretary.....Parkersburg

OFFICERS OF ADMINISTRATION AND INSTRUCTION

THE OFFICERS OF THE UNIVERSITY

DANIEL BOARDMAN PURINTON, Ph. D., LL. D., President
POWELL BENTON REYNOLDS, D. D., Chaplain
WAITMAN BARBE, Litt. D., Assistant to the President and Field Agent
SUSAN MAXWELL MOORE, A. B., Dean of Women
ALFRED JARRETT HARE, A. M., Registrar
ALEXANDER REID WHITEHILL, Ph. D., Bursar
DAVID DALE JOHNSON, A. M., Editor of the University Bulletin
W. J. WHITE, Accountant

THE UNIVERSITY COUNCIL

Daniel Boardman Purinton
Harry Anthony Eaton
Alfred Jarrett Hare
Alexander Reid Whitehill
Waitman Barbe
Powell Benton Reynolds
Charles Edgar Hogg
Thomas Clark Atkeson
Frederick Wilson Truscott
Will Hazen Boughton
James Morton Callahan

STANDING COMMITTEES.

Classification and Grades.

Jasper Newton Deahl
Alfred Jarrett Hare
Clement Ross Jones
Frank Butler Trotter
James Morton Callahan

Ways and Means.

Charles Henry Patterson
William Patrick Willey
John Arndt Eiesland
Frederick Lincoln Emory
Louis Black

Athletics.

Henry Sherwood Green
Aretas Wilbur Nolan
Anthony Wencel Chez
Harry Anthony Eaton
Dennis Martin Willis

Students' Aid.

Russell Love Morris
William Jackson Leonard
Frederick Lawrence Kortright
Rufus West

Library

Lucy Ella Fay
James Morton Callahan
Henry Sherwood Green
Albert Moore Reese
Charles Henry Patterson

Women Students

Grace Martin Snee
Margaret Buchanan
Susan Maxwell Moore
Louise Ferris Chez
Eva Emma Hubbard

Stationery and Printing

John Harrington Cox
Simeon Conant Smith
Oliver Perry Chitwood
Frank Butler Trotter
David Dale Johnson

THE FACULTY

DANIEL BOARDMAN PURINTON, PH.D., LL.D. President's House

President and Professor of Philosophy

A.B., West Virginia University, 1873; A.M., *ibid.*, 1876; Ph.D., University of Nashville, 1892; LL.D., Denison University, 1889. Instructor Preparatory Department of West Virginia University, 1873-8; Professor of Logic, *ibid.*, 1878-81; Professor of Mathematics, *ibid.*, 1881-5; Professor of Metaphysics, *ibid* 1885-9; Vice-President and Acting President, *ibid.*, 1881-2; Instructor in Vocal Music, *ibid.*, 1873-89; President, Denison University, 1890-1901; present position since 1901.

JAMES SCOTT STEWART, B.S., M.S., 146 Willey Street

Professor of Mathematics, Emeritus

B.S., West Virginia University, 1877; M.S., *ibid.*, 1880. Assistant in Preparatory School, West Virginia University, 1877-91; Professor of Mathematics, *ibid.*, 1891-3; Superintendent of Schools, Fairmont, West Virginia, 1893-4; Professor of Mathematics, 1894-1907; present position since 1907.

WILLIAM PATRICK WILLEY, A.B., A.M. 250 Pleasant Street

Professor of Equity, Jurisprudence, and Commercial Law

A.B., Dickinson College, 1862; A.M., *ibid.*, 1865. Member Bar, Morgantown, West Virginia, and Baltimore, Maryland, 1866-78; present position since 1883.

POWELL BENTON REYNOLDS, A.M., D.D. 87 Grant Avenue

Chaplain and Professor of Economics and Sociology

A.M., West Virginia University, 1887; D.D., Richmond College, 1890; Student Richmond College, 1866-70; President, Buckner College, 1884-5; Professor of English, West Virginia University, 1885-9; Vice-President and Professor of Metaphysics, *ibid.*, 1889-93; Acting President, *ibid.*, 1893-5; Professor of Metaphysics and Political Science, *ibid.*, 1895-7; Professor of Philosophy, 1897-1901; Acting President, 1901; present position since 1901.

ALEXANDER REID WHITEHILL, A.M., PH. D. 128 Willey Street

Professor of Chemistry

A.B., Princeton University, 1874; A.M., *ibid.*, 1877; Ph.D., Washington and Jefferson College, 1887; Graduate student, University of Leipzig and Freiberg School of Mines, Germany, 1874-5. Professor of Experimental Science, University Mound College, 1876-81; Principal, Linsly Institute, 1881-5; present position since 1885.

THOMAS CLARK ATKESON, M.S., PH.D. 234 Prospect Street

Dean of the College of Agriculture and Professor of Agriculture

LL.B., Kentucky University, 1874; Ph.B., Central Normal College, 1891; Ph.D., *ibid.*, 1893; M.S., Barboursville College, 1900; Student Kentucky Agricultural and Mechanical College, 1874-6. Professor of Agriculture, West Virginia University, 1891-3; President, Barboursville College, 1896-7; present position since 1897.

FREDERICK LINCOLN EMORY, M.M.E., M.E. 156 Foundry Street

Professor of Mechanics and Applied Mathematics

B.S., Worcester Polytechnic Institute, 1887; M.M.E., Cornell University, 1896; M.E., Worcester Polytechnic Institute, 1899. Director, Mechanical Department, Washington, D. C., High School, 1887-90; Superintendent, Trades School, Concord Junction, Massachusetts, 1890-1; Professor of Mechanical Engineering and Mechanic Arts, West Virginia University, 1891-3; Director, Indianapolis Industrial Training and Technical High School, 1893-5; present position since 1897.

SAMUEL BOARDMAN BROWN, A.B., A.M. 640 High Street

Professor of Geology and Mineralogy

A.B., West Virginia University, 1883; A.M., *ibid.*, 1886; Teacher of Language and Mathematics, Martinsburg, West Virginia, 1883-5; Principal, Glenville State Normal School, 1885-90; Assistant in Geology, West Virginia University, 1890-2; present position since 1892.

ROBERT ALLEN ARMSTRONG, A.M., L.H.D. 107 High Street

Professor of English Language and Literature and Head of the Department of English

A.B., West Virginia University, 1886; A.M., *ibid*, 1889; Graduate student, University of Chicago, 1898; Columbian University, 1900; A.M., Harvard University, 1903; L.H.D., Allegheny College, 1908. Principal, West Liberty State Normal School, 1886-93; Professor of Mathematics, West Virginia University, 1893-4; Professor of English, West Virginia University, 1894-1901; Vice-President, *ibid.*, 1897-9; present position since 1901.

BERT HOLMES HITE, M.S. Peabody Hotel

Professor of Agricultural Chemistry

M.S., West Virginia University, 1890; Graduate student, Johns Hopkins University, 1891-5; Fellow in Chemistry, *ibid.*, 1893-5. Chemist of West Virginia Agricultural Experiment Station since 1895; Vice Director, *ibid.*, since 1902; Professor of Organic Chemistry, West Virginia University, 1895-7; Chief Chemist, West Virginia Geological Survey since 1898; present position since 1897.

ALFRED JARRETT HARE, A.B., A.M. 411 High Street

Professor of the Latin Language and Literature

A.B., West Virginia University, 1889; A.M., *ibid.*, 1902; Graduate Student, Harvard University, 1900-1901. Assistant in Latin and Mathematics, Preparatory School, West Virginia University, 1889-96; Preparatory Professor of Ancient Languages and Mathematics, *ibid.*, 1896-8; present position since 1898.

CHARLES HENRY PATTERSON, A.B., A.M. 294 Grand Street

Professor of Rhetoric

A.B., Tufts College, 1887; A.M., *ibid.*, 1893. Assistant Professor of Rhetoric and Elocution, West Virginia University, 1898-9; Professor of Rhetoric and Elocution, 1899-1903; present position since 1903.

FREDERICK WILSON TRUSCOTT, A.M., PH.D.,
34 University Driveway

Professor of Germanic Languages and Literature

A.B., Indiana University, 1891; A.M., *ibid.*, 1892; A.M., Harvard University, 1894; Ph.D., *ibid.*, 1896; Graduate student of University of Berlin, 1896-8, 1900-1. Instructor in German, Indiana University, 1891-3; Assistant and Fellow in German, Harvard University, 1893-6; Assistant Professor of Germanic Languages and Literatures, West Virginia University, 1897-9; present position since 1899.

HENRY SHERWOOD GREEN, A.B., LL.D. 246 Fife Avenue

Professor of the Greek Language and Literature

A.B., Yale University, 1879; LL.D., Bethany College, 1901. Teacher of Latin and Greek, Hillman Academy, Wilkesbarre, Pennsylvania, 1879-1881; Principal, *ibid.*, 1881-6; Teacher in Preparatory School, Richmond, Kentucky, 1889-92; Acting Professor of Greek, Central University, Richmond, Kentucky, 1892-3; Principal of Harrodsburg Academy, Harrodsburg, Kentucky, 1893-6; Professor of the Greek Language and Literature, Bethany College, Bethany, West Virginia, 1896-1900; Associate Professor of the Greek Language and Literature, West Virginia University, 1900-1; present position since 1901.

CLEMENT ROSS JONES, B.S.C.E., M.M.E. 262 McLane Avenue

Professor of Mechanical Engineering

B.S.C.E., West Virginia University, 1894; M.E., *ibid.*, 1897; M.M.E., Cornell University, 1900; Special student in shop work, Worcester Polytechnic Institute, Summer, 1896; Special student in Experimental Engineering, Stevens Institute of Technology, Summer, 1897. Associate Principal, West Virginia College, 1894; Assistant in Mechanical Engineering, West Virginia University, 1895-7; Instructor, *ibid.*, 1897-9; Assistant Professor of Mechanical Engineering, 1899-1901; present position since 1901.

WILL HAZEN BOUGHTON, B.S.C.E., C.E. 312 Park Street

Professor of Civil Engineering

B.S. (C.E.), University of Michigan, 1893; C.E., *ibid.*, 1898; Graduate student in mathematics, University of Chicago, summer quarters, 1898-9. Assistant Engineer of Maintenance of Way for the Cleveland, Cincinnati, Chicago, and St. Louis Railway; Bridge and Structural Draftsman for the American Bridge Company and the Brown Hoisting Machinery Company; Consulting Engineer for County Court of Monongalia County, West Virginia; Consulting Engineer for Board of Education, Morgantown, West Virginia; Instructor in Mathematics and Civil Engineering, Denison University, 1894-1902; Assistant Professor of Civil Engineering, *ibid.*, 1902-3; present position since 1903.

RUSSELL LOVE MORRIS, B.S.C.E., C.E. 357 Front Street

Professor of Civil Engineering

B.S.C.E., West Virginia University, 1895; C.E., *ibid.*, 1898. Consulting Engineer, State Board of Agriculture; Assistant in Civil and Mining Engineering, West Virginia University, 1895-7; Assistant Professor of Civil and Mining Engineering, *ibid.*, 1897-1903; present position since 1903.

JASPER NEWTON DEAHL, A.M., PH.D. 414 Park Street

Professor of Education

A.B., University of Nashville, 1889; A.B., Harvard University, 1893; Higher Diploma, Teachers College, Columbia University, 1899; A.M., Columbia University, 1899; Ph.D., *ibid.*, 1906. Fellow in Education, Teachers College, Columbia University, 1899-1900; Principal, West Liberty State Normal School, 1893-8; Assistant Professor of Education, West Virginia University, 1901-2; Associate Professor of Education, 1902-3; present position since 1903.

JOHN LEWIS SHELDON, A.M., PH.D. 57 Ash Street

Professor of Botany and Bacteriology

B.Pd., B.Sc., Ohio Northern University, 1895; B.Sc., University of Nebraska, 1899; M.Sc., Ohio Northern University, 1899; A.M., University of Nebraska, 1901; Ph.D., *ibid.*, 1903. Instructor in Mathematics, Mount Hermon (Mass.) School, 1892-4; Instructor in Botany, Preparatory School to the State University (Nebraska), 1898-9; Acting Head of the Department of Biology, Nebraska State Normal School, 1899-1900; Instructor in Botany, University of Nebraska, 1900-3; Fellow in Botany, *ibid.*, 1900-3; Professor of Bacteriology and Bacteriologist of the West Virginia Agricultural Experiment Station, 1903-7; present position since 1907.

SUSAN MAXWELL MOORE, A.B. 247 Willey Street

Dean of Women

A.B., West Virginia University, 1909; Student in Peabody Institute, Baltimore, Maryland, 1878-9; Student in New England Conservatory, Boston, Massachusetts, (Piano, Carl Faelten, Organ, George E. Whiting), 1885-7; Teacher of Piano, Mount Holyoke College, Massachusetts, 1887-91; Student in Berlin (Piano, Oscar Raif), 1891-2; Teacher of Piano, Conservatory of Music, Ottumwa, Iowa, 1892-3; Head of Piano Department, Shepardson College and Denison University, Granville, Ohio, 1893-1903; Summer Course under Carl Faelten, Boston, Massachusetts, 1898; Faleten Piano School, Summer, 1901; present position since 1903.

JAMES MORTON CALLAHAN, A.M., PH.D., 93 Logan Avenue

Professor of History and Political Science

A.B., University of Indiana, 1894; A.M., *ibid.*, 1895; Ph.D., Johns Hopkins University, 1897; Graduate student, Chicago University, 1894, Johns Hopkins, 1894-7. Chair of History and Civics, Southern Indiana Normal College, 1890-2; Assistant and Fellow, Johns Hopkins University, 1895-7; Acting Professor of American History and Constitutional Law, Hamilton College, 1897-8; Lecturer on Diplomatic History and International Relations, Johns Hopkins University, 1898-1901; Director, Bureau Historical Research, Washington, D. C., 1900-2; Associate Professor, West Virginia University, 1902-3; present position since 1903.

ANTHONY WENCEL CHEZ, A.B. 748 North Front Street

Director of Physical Training

Graduate, Chautauqua School of Physical Education, 1902; Graduate, Harvard School of Physical Training, 1903; A.B., West Virginia University, 1907. Graduate Coach, Oberlin College, 1899; Director of Gymnasium and Athletic Coach, Wabash College, 1900-1; Professor of Physical Training and Athletic Coach, De Pauw University, 1901-2; Director of Physical Culture and Athletic Coach, University of Cincinnati, 1902-4; Assistant, Harvard Summer School of Physical Training, 1905; present position since 1904.

JOHN NATHAN SIMPSON, A.B., M.D. 293 High Street

Professor of Anatomy and Physiology and Head of the Medical Faculty at Morgantown

A.B., University of Nashville, 1893; M.D., Johns Hopkins University, 1902. First Assistant in Marshall College, 1893-7; Instructor in Anatomy and Physiology, West Virginia University, 1902-3; Associate Professor, 1903-4; present position since 1904.

JOHN HARRINGTON COX, PH.B., A.M. 188 Spruce Street

Professor of English Philology

Graduate, Illionois State Normal University, 1891; Ph.B., Brown University, 1897; A.M., Harvard University, 1900. Educational Director, Twenty-Third Street Branch, Young Men's Christian Association, New York City, 1897-9; Graduate student, Harvard University, 1899-1901; Professor of the English Language and Literature, University of North Dakota, 1901-2; Instructor of English Philology West Virginia University 1902-3; Associate Professor of English Philology, 1903-4; present position since 1904.

CHARLES EDGAR HOGG, LL.D. 498 Grand Street

Dean of the College of Law and Professor of Constitutional and International Law

LL.D., Temple University, 1907; present position since 1906.

FREDERICK LAWRENCE KORTRIGHT, B.S., D.Sc.

234 Jackson Avenue

Professor of Chemistry

B.S., Cornell University, 1890; D.Sc., *ibid.*, 1895; graduate student, Polytechnicum, Switzerland, 1899-1900, and Technische Hochschule, Carlsruhe, Germany, 1900. Assistant in Chemistry, Cornell University, 1890-1; Chemist, Solvy Process Company, 1891-2; Assistant in Chemistry, Cornell University, 1892-3; Instructor in Chemistry, *ibid.*, 1893-9; Assistant Professor of Chemistry, West Virginia University, 1900-2; Associate Professor of Chemistry, *ibid.*, 1902-7; present position since 1907.

FRANK BUTLER TROTTER, A.B., A.M. 502 High Street

Professor of Latin

A.B., Roanoke College, 1890; A.M., *ibid.*, 1895; Graduate student, Harvard University, 1891-2. Professor in West Virginia Wesleyan College, 1890-1907, and Vice-President, *ibid.*, 1894-1907; present position since 1907.

HARRY ANTHONY EATON, A.B., LL.B. 299 Grand Street

Captain U. S. Army, Professor of Military Science and Tactics and Commandant of Cadets

A.B., West Virginia University, 1897; LL.B., *ibid.*, 1898. Sergeant Major 1st West Virginia Volunteers, May 14 to 22, 1898; 1st Lieutenant 1st West Virginia Volunteers to July 21, 1898; 2nd Lieutenant 8th United States Infantry, July 22, 1898; Served in that regiment until promoted Captain, August 22, 1903, and assigned to 23rd United States Infantry; present position since 1907.

JOHN ARNDT EIESLAND, PH.B., PH.D. 23 Demain Street

Professor of Mathematics

Ph.B., University of South Dakota, 1891; Graduate student, Johns Hopkins University, 1892-5 and 1897-8; Ph.D., Johns Hopkins University, 1898. Taught in public schools of Norway; Teacher in Luther Academy, Minnesota, 1891-2; Professor Mathematics in Thiel College, Greenville, Pennsylvania, 1895-1903 Instructor in Mathematics in United States Naval Academy, 1903-7; present position since 1907.

JUSTIN FRANK GRANT, PH.B., M.D. 258 McLane Avenue

Professor of Anatomy and Pathology

Ph.B., Yale University, 1898; M.D., Johns Hopkins University, 1903. Resident Physician and Surgeon, Hahnemann Hospital, Rochester, New York, 1900-1; Instructor in Anatomy, West Virginia University, 1903-4; assistant Professor of Anatomy, West Virginia University, 1904-5; Assistant Professor of Anatomy and Pathology, *ibid.*, 1906-7; present position since 1907.

ALBERT MOORE REESE, A.B., PH.D. 293 Willey Street

Professor of Zoology

A.B., Johns Hopkins University, 1892; Ph.D., *ibid.*, 1900. Lecturer in Chemistry, Southern Homeopathic Medical College, 1892-6; Lecturer in Histology and Embryology, Pennsylvania College, 1896; Professor of Biology and Geology, Allegheny College, 1901-2; Instructor in Histology and Embryology, Syracuse University, 1902-3; Associate Professor of Histology and Embryology, *ibid.*, 1903-7; present position since 1907.

OLIVER PERRY CHITWOOD, A.B., PH.D. 293 Willey Street

Professor of European History

A.B., William and Mary College, 1899; Ph.D., Johns Hopkins University, 1905. Librarian of William and Mary College, 1898-9; Headmaster, Richmond Academy, 1902-3; Fellow in History, Johns Hopkins University, 1904-5; Professor of History and Political Economy, Mercer University, 1905-7; present position since 1907.

C. EDMUND NEIL, A.B., A.M. Madera Hotel

Professor of Elocution and Oratory

A.B., McKendree University, 1895; A.B., Ohio Wesleyan University, 1897; Private pupil of Leland T. Powers, 1895-8 (Summers); A.M., Ohio Wesleyan University, 1908. Instructor in Elocution, Ohio Wesleyan University, 1895-6; Assistant Professor of Oratory, Ohio Wesleyan School of Oratory, 1896-7; Professor of Elocution, Denison University, 1897-8; Professor of Oratory and Elocution, Denison University, 1901-3; Assistant Professsor of Elocution and Oratory, West Virginia University, 1904-8; present position since 1908.

JAMES RUSSELL TROTTER, LL.B., PH.D. 15 Demain Avenue

Professor of Law

A.B., West Virginia University, 1891; A.B., Harvard University, 1895; A.M., *ibid.*, 1896; LL.B. and Ph.D., West Virginia University, 1902. Instructor in West Virginia Conference Seminary, 1891-2; Principal, Clarksburg High School, 1892-4; State Superintendent of Free Schools of West Virginia, 1897-1901; present position since 1908.

EDWIN FAYETTE CHURCH, JR., B.S., M.S. 336 Park Street

Professor of Machine Design

B.S., Massachusetts Institute of Technology, 1901; M.S., *ibid.*, 1909. Draftsman and Assistant to Chief Engineer, William Cramp and Sons, Philadelphia, 1901-3; Draftsman, I. P. Morris Company, Philadelphia, 1903; Instructor in Marine and Mechanical Engineering and Naval Architecture, Lehigh University, 1903-4; Assistant Professor of Mechanical Engineering, West Virginia University, 1904-6; Associate Professor of Mechanical Engineering, *ibid.*, 1906-9; present position since 1909.

WILLIAM ELMORE DICKINSON, A.B., M.M.E. 334 Park Street

Professor of Electrical Engineering

L.I., College of William and Mary, 1895; A.B., *ibid* 1901; M.E.-E.E., Cornell University, 1904; M.M.E., *ibid.*, 1909; Student apprentice, Stanley Electrical Manufacturing Company, Pittsfield, Massachusetts, 1903. Member of Testing Corps, Electric Railway Test Commission, Louisiana Purchase Exposition, 1904; Assistant Engineer, Westinghouse, Church, Kerr, and Company, New York, 1904-5; Instructor in Electrical Engineering, West Virginia University, 1905-6; Assistant Professor of Electrical Engineering, *ibid.*, 1906-7; Associate Professor of Electrical Engineering, *ibid.*, 1907-9; present position since 1909.

CHAUNCEY WILLIAM WAGGONER, A.M., PH.D. 108 Cedar Street

Professor of Physics

B.S.E.E., Ohio University, 1904; A.M., Cornell University, 1905; Ph.D., *ibid.*, 1909; University Graduate Scholar in Physics, Cornell University, 1904-5. Research Engineer for Western Electric Company, New York, Summer, 1907; Instructor in Physics, Cornell University, 1905-9; present position since 1909.

ROBERT BRUCE BRINSMADE, B.S., E.M. 136 High Street

Professor of Mining Engineering

B.S. in Mining, Washington University, 1894; E.M., Lehigh University, 1895. Engineer, Standard Paving Brick Company and Acetylene Gas Company, St. Louis, Missouri, 1895-6; Chemist, Combination Mining Company, Montana, 1896; Mining Engineer for Parrott Mines, Anaconda Mines, and W. A. Clarke, Butte, Montana, and for War Eagle Mines, Rossland, B. C., 1897-1900; Assistant Manager, Missouri Lead Fields Company, Elvins, Missouri, 1900; Superintendent, Cia Minas y Fundicion, Cordoba, Argentina, South America, 1902; Superintendent, Rossie Iron Mines, New York, 1905; Professor of Mining Engineering, New Mexican Mining School, 1906; Director, Wisconsin Mining Trade School, 1908; Mine Exploration, San Domingo, W. I., 1909; present position since 1910.

WAITMAN BARBE, A.M., LITT.D. Peabody Hotel

Assistant to the President and Associate Professor of the English Language and Literature

B.S., West Virginia University, 1884; M.S., *ibid.*, 1887; A.M., 1897; Litt.D., Denison University, 1904; Graduate student, Harvard University, 1901; Graduate student, Oxford University, England, 1908-9. Field Agent, West Virginia University, 1895-8; present position since 1898.

WILLIAM JACKSON LEONARD 36 University Driveway

Associate Professor of Fine Arts

Student, The Cowles Art School, Boston, 1889-90; Pupil of Jean Paul Laurens and Benjamin Constant, Paris, 1891-3; Student, Academie Julien and Ecole des Beaux Arts, Paris; Special student, Harvard University. Instructor in Fine Arts, West Virginia University, 1900-2; present position since 1902.

DANIEL WEBSTER WORKING, B.Sc., A.M. 35 Maple Avenue

Superintendent of Agricultural Extension Work

B.S., Kansas State Agricultural College, 1888; A.M., University of Denver, 1907; Attended Graduate School of Agriculture, Cornell University, Summer of 1908. Editor, Colorado Farmer and Live Stock Journal, 1889-91; Secretary, Colorado State Board of Agriculture, Agricultural College, and Agricultural Experiment Station, 1893-7; Editor, Irrigation Review, 1897-8; County Superintendent of Schools, Arapahoe County, Colorado, 1905-7; present position since 1907.

SIMEON CONANT SMITH, A.B., A.M. 107 High Street

Associate Professor of Rhetoric

A.B., Tufts College, 1898; A.M., West Virginia University, 1902; Graduate student, Harvard University, 1903-4. Fellow in Rhetoric and Elocution, West Virginia University, 1899-1900; Instructor in Rhetoric and Assistant in English in the Preparatory School, 1900-6; Assistant Professor of Rhetoric, 1906-9; present position since 1909.

LLOYD LOWNDES FRIEND, A.B., A.M. Charleston

Associate Professor of Secondary Education and State Supervisor of High Schools

A.B., West Virginia University, 1897; A.M., Columbia University, 1906. Instructor in English, Preparatory Schools, West Virginia University, 1897-1902; Principal Keyser Preparatory School West Virginia University, 1902-5; Assistant to the State Superintendent of Schools of West Virginia,, 1907-9; present position since January 1, 1910.

*MADISON STATHERS, A.B., PH.D. 222 Pleasant Street

Assistant Professor of Romance Languages

A.B., West Virginia University, 1901; Graduate student in Paris and Grenoble, Summer of 1904, and Grenoble, 1904-5; Ph.D., University of Grenoble, France, 1905; Studied in Spain, Summer of 1905. Principal of Preparatory Department and Assistant in Latin, West Virginia Conference Seminary, 1902-3; Professor of Romance Languages and Literature, West Virginia Wesleyan College, 1903-6; Instructor in Romance Languages, West Virginia University, 1906-7; present position since 1907.

ARETAS WILBUR NOLAN, A.M. 203 Allen Avenue

Assistant Professor of Horticulture, Forestry, and Economic Entomology

A.B., Indiana University, 1905; A.M., West Virginia University, 1909; Graduate student, Winona Biological Station, 1906; Graduate student, Columbia University, 1907. Institute Lecturer in Nature Study and Forestry, LaGrange, Indiana; Principal and Instructor in Biology, High School, Cayuga, Indiana, 1900-3; Superintendent and Instructor in Biology, City Schools, Howe, Indiana, 1903-8; present position since 1908.

DENNIS MARTIN WILLIS, A.B., LL.M 242 Jackson Avenue

Head of the Department of Commerce

LL.B., West Virginia University, 1899; A.B., *ibid.*, 1905; LL.M., *ibid.*, 1908. Instructor, West Virginia Conference Seminary, Buckhannon, 1891-2; Instructor, Northwestern Academy, Clarksburg, 1893-4; Principal of Commercial School, West Virginia University, 1895-1910; present position since 1910.

FREDERICK RANDOM WHIPPLE, M.D.V. 100 Beverly Avenue

Assistant Professor of Veterinary Science

M.D.V., McKillip Veterinary College, 1902. Assistant in the Department of Pharmacology, *ibid.*, 1902-7; United States Government Veterinarian, 1906-07; Consulting Veterinarian, West Virginia State Board of Agriculture, 1909; Instructor in Veterinary Science, West Virginia University, 1907-9; present position since 1909.

CLARENCE POST, A .B. 45 Stewart Street

Instructor in Physics

A.B., West Virginia University, 1907; Graduate student, Cornell University, Summer of 1907. Present position since 1907.

CHARLES AUGUSTUS LUEDER, D.V.M. 722 North Front Street

Instructor in Dairying and Veterinary Science

D.V.M., Cornell University, 1902; Graduate student, Cornell University, 1903. Instructor in Dairying, West Virginia University, 1908-9; present position since 1909.

CHARLES WALKER SPRINGER, V.M.D.

Instructor in Veterinary Science

V.M.D., University of Pennsylvania, 1905. Member of American Veterinary Medical Association, and of the Veterinary Medical Society of the University of Pennsylvania. Present position since 1908.

---

*On leave of absence from March to September, 1910.

THOMAS HOWARD CATHER 394 Willey Street

Instructor in Machine Shop and General Foreman of Shops

Apprentice, Baltimore and Ohio Railroad, Grafton, West Virginia, 1887-91; Machinist, Burlington Railroad in Missouri, and Union Pacific Railroad, 1891-3; Chicago, Rock Island, and Pacific Railroad, Horton, Kansas, 1893-5; Cotton Belt Railroad, Pine Bluff, Arkansas, 1895-7; Navy Yard, Washington, D. C., 1898; Foreman, Baltimore and Ohio Erecting Shop, Grafton, West Virginia, 1899-1902; Foreman of the Machine Shop, 1902-9; present position since 1909.

JOHN BEHNY GRUMBEIN, B.S.M.E. 195 Grant Avenue

Instructor in Mechanical Engineering and Foreman of the Wood Shop

B.S.M.E., West Virginia University, 1909; Apprentice, Orr, Painter and Company, Reading, Pennsylvania, 1895-8; Pattern Maker, Harrisburg Foundry and Machine Company, 1898-9; Robert Wetherel and Company, Chester, Pennsylvania, 1899; Ingersoll-Sergeant Drill Company, Easton, Pennsylvania, 1899-1900; Foreman of Pattern Shop, Blaisdell Machinery Company, Bradford, Pennsylvania, 1900-3; Foreman of the Wood Shop, 1903-9; present position since 1909.

ARTHUR ROLLINS GRAVES, A.B., A.M. 269 Willey Street

Instructor in German

A.B., Wesleyan University, 1908; A.M., Harvard University, 1910; Student in Marburg School, Germany, Summer of 1909. Present position since 1909.

ARLEIGH LEE DARBY, A.B., A.M. Peabody Hotel

Instructor in Romance Languages

A.B., Waynesburg College, 1899; A.M., Waynesburg College, 1903; A.B., University of Chicago, 1906; Student in University of Grenoble, France, and in Rome, Italy, Summer and Fall of 1904. Assistant Professor of Latin and Greek, Waynesburg College, 1899-1903; Assistant Professor of Latin, Miami University, Summer of 1907; Professor of Latin and French, Waynesburg College, 1903-9; present position since 1909.

BENJAMIN WALTER KING, A.B. 131 Fayette Street

Instructor in Commerce and Secretary to the President

A.B., West Virginia University, 1909. Assistant Secretary to the President, 1906-8; Secretary and Acting Assistant to the President, 1908-9; Assistant in Shorthand and Typewriting and Secretary to the President, 1909; present position since 1910.

ARTHUR EVERETT FINNEY, A.B.

Acting Instructor in Romance Languages

A.B., Boston University, 1905; Graduate Student, Harvard University, 1908-9.

MABEL CONSTANCE FOSTER Madera Hotel

Assistant in Music

Student in Conservatory of Music, Philadelphia, 1891-2; Pupil of Von Westernhagen, Philadelphia, 1893; Pupil of Elisa Mazzucato Young in Harmony, 1897-1901; Student in Sherwood School of Music, 1901-2; present position snce 1902.

LOUISE FERRIS CHEZ — 748 North Front Street

Assistant Director of Physical Training, in charge of the Women's Gymnasium

Graduate, Chautauqua School of Physical Education, 1902; Graduate work in Massage and Swedish System. Assistant to Jakob Bolin of New York City in Clinic of Corrective and Orthopedic Gymnastics, 1903; Director of Physical Training for Women, De Pauw University, 1901-2; Director of Physical Culture for Women, University of Cincinnati, 1903-4; present position since 1904.

RUFUS ASA WEST — 181 First Street

Assistant in Metal Working and Stationary Engineer

Apprentice, Fairchild, Lawhead and Company, Carriage Builders, 1887-90; Blacksmith, Tygart Mfg. Co., 1890-2; Special student, Springs Garden Institute, Summer, 1897; Head Stationary Engineer, National Export Exposition at Philadelphia, Fall, 1899; present position since 1892.

URIAH BARNES, LL.B. — 4 Ash Street

Assistant in Law

LL.B., Illinois College of Law, 1907. Present position since 1908.

NEVA AUGUSTA SCOTT — 480 High Street

Assistant in Domestic Science

Student in Eastern Illinois State Normal School, 1903-6; Student in University of Illinois, 1907-8; Graduate of the National School of Domestic Arts and Sciences, 1909. Instructor in Domestic Arts and Sciences, West Virginia University Summer School, 1909; present position since 1909.

LIBRARY STAFF

*LUCY ELLA FAY, A.M., B.L.S. — 224 Willey Street

Librarian

A.B., Newcomb College, Tulane University, 1895; A.M., University of Texas, 1901; B.L.S., New York State Library School, 1908. Instructor in Latin and Greek, Whitis School, Austin, Texas, 1901-3; Professor of English, State College of Industrial Arts, Denton, Texas, 1903-6; Assistant, New York State Education Department, Division of Travelling Libraries, 1908-9; present position since 1909.

SLOAN DUNCAN WATKINS

Librarian

JESSICA GARDINER CONE — 120 High Street

Assistant Librarian

Vassar College, 1879-80; New York State Library School Diploma, 1897; Library Organizer and Cataloguer, 1897-1904; present position since 1904.

DORA MOORE, PH.B. — 324 Willey Street

Assistant Librarian

Ph.B., Denison University, 1903; Student in Summer School, West Virginia University, 1905; Course in Library Science, New York State Library School, 1906-7. Present position since 1907.

---

*Resigned, April 1, 1910.

KATHERINE CLIFTON HEDRICK — Woman's Hall

Assistant in Law Library

Private Secretary to President of West Virginia Supreme Court of Appeals, 1896-1901; Reporter of Supreme Court Decisions for the Law Journal of West Virginia Bar Association, 1897-1901; present position since 1903.

ANNA GRACE COX — 85 Beverly Avenue

Assistant Librarian

FRANCIS WILLARD STEELE — Cox & Baker Building

Assistant Secretary to the President

Assistant in Shorthand and Typewriting, 1908-9; present position since 1909.

EDWARD HARTMAN MUNSON, PH.B. — 571 Spruce Street

General Secretary. Young Men's Christian Association

Ph.B., Iowa College, Grinnell, Iowa, 1909; attended Training School for Young Men's Christian Association Secretaries, Summer of 1909. Present position since 1909.

†MARTHA RAY MARTIN — 642 Jones Avenue

Stenographer

---

†Resigned, February, 1910.

THE UNIVERSITY

HISTORICAL SKETCH

FOUNDATION

West Virginia University originated from the national land grant act of July 2, 1862, and the subsequent action of the state legislature in accepting and carrying out the provisions of the act, and from the foundations of an educational institution which had already been laid at Morgantown for half a century.

The act of 1862 granted lands or land script to each state in proportion to the number of its senators and representatives in Congress. The proceeds of the sale of these lands were to be invested in safe stocks yielding not less than five per cent upon the par value of the stocks and this interest "inviolably appropriated by each state which may take and claim the benefit of this Act to the endowment, support and maintenance of at least one college where the leading objects shall be, without excluding other classical and scientific studies, and including military tactics, to teach such branches of learning as are related to agriculture and mechanic arts in such manner as the legislature of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

On October 3, 1863, the West Virginia legislature, empowered by the constitution to foster education and organize institutions of learning in the interest of the people of the state, accepted the conditions of the act of Congress and appropriated $500.00 to defray the expenses of procuring and selling the land script and of investing the proceeds. Congress by act of April 14, 1864, extended the preceding act to West Virginia, and the latter received land script for 150,000 acres. By joint resolution of January 24, 1867, the legislature submitted to Congress strong reasons for an additional appropriation, but the appeal was without success.

Steps were soon taken to select a location for the college. Among the towns which made substantial offers to secure it was

Morgantown, which was already the seat of Monongalia Academy (incorporated by the Virginia legislature November 29, 1814), Morgantown Female Seminary (established 1831 and incorporated 1839), and Woodburn Female Seminary (incorporated January 4, 1858). On January 9, 1866, the board of trustees of the Monongalia Academy tendered to the legislature, for the use of the college, all its property, including Woodburn Female Seminary, estimated at $51,000, on condition that the college should be located at Morgantown. On January 30, 1867, the legislature accepted the property, and on February 7 passed an act permanently establishing the "Agricultural College of West Virginia," and authorizing the governor to appoint eleven suitable persons, one from each senatorial district, to constitute a board of visitors. The powers and duties of the board were clearly defined by the act and were largely the same as the subsequent powers and duties of the regents, except that the board was a close corporation filling vacancies produced by death of members, and each year electing two new members to fill the places made vacant by lot.

The eleven visitors were soon appointed and on April 3, 1867, held their first meeting at Woodburn Seminary. After the selection of Alexander Martin as president, they proceeded to discuss what style and character the college should assume—whether it should be for the exclusive purpose of training farmers and soldiers, or whether it should offer instruction in all the subjects that were generally understood to belong to the curriculum of a "college," comprising every essential department of education from the foundation upwards. They decided upon the latter. In addition to the preparatory department, in the academy building, they established "three distinct and separate departments of instruction in the college building": (1) collegiate; (2) scientific; (3) agricultural. They also provided for instruction in military tactics. They intended to establish primarily a college that would meet the needs of general education in West Virginia and that would eventually, by expansion, "be able to educate liberally young men in all the professions and pursuits of life."

By an act of March 3, 1868, the legislature appropriated $6,000 for the general use of the college, to be spent as the board might direct, and $10,000 to supplement the permanent endowment. A subsequent act (June 25, 1868), in order to provide better facilities, authorized the sale of Monongalia Academy and dwelling, and the application of the proceeds to the construction of another building on the main college grounds. In the following July the Academy building and grounds were sold to the board of education of Morgantown. Soon thereafter, in the presence of a large assemblage, the corner stone of Martin hall was laid.

GOVERNMENT

By the act of December 4, 1868, which changed the name of the college to "West Virginia University," the name of the "board of visitors" was changed to the "board of regents," with duties and powers defined practically as at present, and provision was made that vacancies in the board should be filled by the governor. On April 12, 1873, an act amending the school law contained a provision that the board of regents should consist of one person from each of the nine judicial circuits, to be appointed by the "board of the school fund;" but by an act of February 17, 1877 the power of appointment was conferred upon the governor with the advice and consent of the senate.

By act of March 2, 1877, it was provided that the board should consist of one person from each senatorial district, to be appointed by the governor as provided by law; and that the board should be changed regularly by the retirement of two members each year after June 30, 1877. Vacancies on the board were to be filled by the governor as before. From 1877 to 1882, under this law there were twelve regents. From 1883 to June 1, 1895, there were thirteen.

The first bi-partizan board was created by the legislature of 1895 and began its term on June 1 of that year. Its members were divided into three groups, one of which was replaced every second year.

The act of 1901 provided for the appointment of a new board of nine members, "who shall be residents and voters of the state," and "who shall be divided into two classes consisting of four and five regents respectively.' The term of office of the first class continued for two years, and the term of the second class for four years; and thereafter, the term of office of each class was to be four years (and until their successors are appointed and qualified). It was also provided that not more than six regents should be of the same political party and that "not more than one shall be appointed from the same senatorial district or county."

By legislative act of 1909 an important change was made in the control of the University. Under this act the financial and business affairs of the University and of all the other state educational institutions are directed by a state board of control consisting of three members appointed by the governor. This board also exercises a general control over the various public institutions of the state. The academic control of the University and also of the other educational institutions of the state, with the exception of the School for the Deaf, Dumb, and Blind, The Boys' Reform School, and The Girls' Industrial School, is vested in a single state board of regents. The board is bi-partisan and consists of the state super-

intendent of free schools (ex officio), who is elected by the people, and of four other members who are appointed by the governor and are responsible to him for the proper conduct of their duties. This board chooses its own chairman or president.

From 1877 to 1896 there was a standing executive committee which assisted in the administration of the University and reported to the board. Until 1886 its membership was local and did not include the president, except from 1868 to 1873. After 1886 its members were also members of the board of regents, except in 1894-5, when the secretary of the committee was a professor in the University. The number of members varied, starting with five, increasing to nine and finally decreasing to three.

The administrative offices created at the time of the establishment of the University were those of the president, the vice president, the principal of the preparatory school, and the superintendent of buildings and grounds. The office of vice president was abolished in 1899. In 1897 the office of assistant to the president was established. Waitman Barbe was elected to the place and still fills it.

The University has had seven regular presidents. Alexander Martin resigned in 1875. He was succeeded by John W. Scott, (acting president), 1875-7; John Rhey Thompson, 1877-81; Daniel Boardman Purinton (acting president), 1881-2; William L. Wilson, 1882-3; Robert C. Berkeley (chairman of the faculty), 1883-5; Eli Marsh Turner, 1885-93; Powell Benton Reynolds (acting president), 1893-5; James L. Goodnight, 1895-7; Jerome Hall Raymond, 1897-1901. On the resignation of President Raymond, Daniel Boardman Purinton was called from Denison University to fill the vacancy. He is the first president selected from the alumni of the institution.

The powers and responsibilities of the president have been greatly increased within recent years. The administrative duties, at first shared by the faculty or the local committee, and from 1899 to 1901 by twenty-three or more efficient but inharmonious committees, have been wisely and satisfactorily unified and placed under the control of the president. Since December 1, 1901, he has acted with the aid of an assistant, a council of advisers, several standing committees, heads of departments, a registrar, and a treasurer or bursar.

As the college expanded from local and traditional conditions the strict rules and discipline of the earlier years became unnecessary, and a more efficient system of administration and co-operation was gradually developed. The strict curriculum of the earlier years, and the loose separate-school elective system (the Virginia plan) which replaced it in June, 1882, have both given way to a partially elastic system in which, since 1895, the choice of studies by the

student is under the oversight and direction of a "class officer," who requires that prescribed courses shall be taken in order, and supervises the selection and arrangement of elective courses.

GROWTH.

For many years the growth of the new institution was very slow and uncertain. This was due to many causes. Among these may be enumerated the partially local foundation, the sectional questions which had divided Virginia long before the war, the new sectional jealousies, the post-bellum political questions and partisanship, the lack of a satisfactory system of secondary schools, the divided responsibility and *laissez faire* policy, and the lack of means of communication with Morgantown. Gradually the power and importance of these causes were reduced by changing conditions. Industrial progress has been a prominent factor in the transformation of the earlier school into a real college.

The University has been greatly aided by the development of better secondary schools. The normal schools have partly solved the problem of suitable preparatory schools for the University. The preparatory school at Montgomery, opened January, 1897, was established by an act of February 16, 1895. Another school was established at Keyser by an act of 1901.

The most remarkable increase in the attendance of the University was coincident with the admission of women. In 1889 women were admitted to the collegiate department. In 1895-6 they were admitted to the college of law. In 1897 they were admitted to the preparatory school and to the schools of music and fine arts.

The phenomenal increase of attendance after 1895 was largely due to the work of the newly created office of field agent of the University and to the addition of new departments. It is instructive to trace how the five departments with which the University started in 1867 have increased to more than twenty-five by expansion and differentiation. [See catalogue of 1906-7.] The dates of the establishment of the special colleges and schools now comprised in the University are as follows: the college of law, 1878; the college of engineering, 1887; the agricultural experiment station, 1888; the college of agriculture, 1897; the school of music, 1897; the school of fine arts, 1897; the college of medicine, 1900.

BUILDINGS

The problem of securing suitable buildings to meet the needs of expansion has been a continuous one. The supply has never exceeded the demand.

Martin Hall was completed in 1870. The first armory building, now the south end of the Experiment Station, begun in 1873, was finished and occupied in 1874. (On June 18, 1874, the corner stone of Woodburn Hall was laid on the site of the Woodburn Seminary building, which had burned in February, 1873. The central part was completed by June, 1876, and the upper floor was used as the commencement auditorium until 1890. As the appropriation was exhausted the two wings were not built at that time.

An addition to the Experiment Station was completed by 1889. In the latter part of the same year Commencement Hall was begun on the grounds purchased in June, 1887, and was completed in 1892.

A wing of the old Mechanical Building, which stood near the river, was ready by September, in 1893, and an addition was finished in 1894. Science Hall was finished and equipped in the summer of 1893. In 1894 all the buildings of the University with their equipments had cost over $250,000, but they were not sufficient to meet the growing needs of the new University.

Early in 1898 work was begun on the north wing of Woodburn Hall. It was completed in 1900 and furnished a home for the music school, which had previously occupied rented rooms on Main street. In 1898 the regents purchased seven acres of the Fife land, on which were two small buildings. After the burning of the old Mechanical Building in 1899, Fife Cottage became the temporary home of the mechanical engineering work until the spring of 1902. The Astronomical Observatory was built near the close of 1900. The Armory, the construction of which had been urged as early as 1888, was finished by 1902. Mechanical Hall, designed in 1899 and begun in 1900, was also completed in 1902. The Library was finished in 1902 and opened in 1903. The President's House was built in 1905. The Central Heating Plant was completed in the early part of 1908. The south wing of Woodburn Hall is now under construction

DESCRIPTION OF THE INSTITUTION

LOCATION

Morgantown, the seat of the University, is the county seat of Monongalia county. It is a beautiful town of twelve thousand inhabitants, located on the Monongahela river and the Baltimore and Ohio railroad, 103 miles east of Wheeling, and the same distance south of Pittsburg. It has modern conveniences of natural gas, water-works, electric lights, street railways, local and long distance telephones, and is noted for its healthful conditions, physical, social, and moral. There are churches of the following denominations in the town: Presbyterian, Methodist Episcopal, Methodist Protestant, Baptist, Protestant Episcopal, Lutheran, Christian, and Roman Catholic. There are no saloons.

Few institutions of learning have more attractive natural sites. The University grounds border the Monongahela river and afford a most picturesque outlook. The campus comprises about fifty acres. The University has also a farm of about one hundred acres for the use of the Agricultural Experiment Station and the College of Agriculture.

ORGANIZATION

The University organization embraces:—

The College of Arts and Sciences; including the Department of Military Science.
The College of Engineering and Mechanic Arts.
The College of Agriculture.
The College of Law.
The College of Medicine.

The following schools are connected with the University in their management and work but do not confer degrees:—

The School of Music.
The School of Fine Arts.
The Summer School.
The Preparatory School.

The West Virginia Agricultural Experiment Station is under the control of the Board of Regents of the University.

FUNDS

The funds for maintaining the University are derived from the following sources: (1) Interest on the land grant endowment of $115,750; (2) the Morrill fund; (3) the Hatch fund; (4) the Adams fund; (5) biennial appropriations by the state legislature; (6) fees and tuition.

BUILDINGS

The buildings are as follows:—

1. Woodburn Hall, a three-story building, containing lecture-rooms and the physiological and zoological laboratories. The third floor of this building is occupied by the University School of Music.

2. Martin Hall, a three-story building, containing lecture-rooms and society halls.

3. Science Hall, a four-story building, containing lecture-rooms, laboratories for the departments of physics, chemistry, and geology, the museum of geology and paleontology, and the President's office.

4. Commencement Hall, a large two-story building, containing a commodious chapel, with 1,500 seats, and the gymnasium.

5. The Agricultural Experiment Station, a two-story building, containing laboratories, lecture-rooms, and offices.

6. The Armory and Drill Hall, for the Department of Military Science.

7. Mechanical Hall, occupied by the College of Engineering and Mechanic Arts.

8. The Library, containing the general library, reading, and seminary rooms.

9. The President's House.

10. The Central Heating Plant.

11. The Woman's Hall, or dormitory, for women students.

12, The Fife Cottages, containing lecture-rooms and the anatomical and botanical laboratories.

Besides these there are the various buildings on the Agricultural Experiment Station Farm.

The first eleven of the buildings mentioned are of brick and stone.

THE UNIVERSITY LIBRARY

The library is open from 8 a. m. to 10 p. m. every week day during the term, except Thanksgiving day, Christmas day, New Year's day, and the Fourth of July. On Sundays, the library is

open, for readers, from 2 to 5 p. m. During the Christmas and summer vacations, it is open on week days from 8 to 12 a. m.

All officers and students and, under special restrictions, persons not connected with the University, have the privilege of drawing books from the library for home use, two volumes being allowed at one time. Direct access is permitted to the shelves in the stack as well as in the reading and reference rooms, and thus students have an opportunity to become acquainted with the literature of the subjects studied, as far as it is represented in the library. The most important books used in connection with the courses of instruction are kept on reserve shelves in the reference room for more convenient access.

A card catalogue, shelf list, and other bibliographic aids are provided and the librarians are ready at all times to give assistance in research and investigation.

The library contains about 30,000 volumes, including 4,500 government documents. Present appropriations provide for an annual increase of about 1,500 volumes. Two hundred and ten periodicals are received, including publications of societies and scientific journals. Most of the county papers of the state are sent to the reading room.

There is a special library belonging to the College of Law, containing 5,000 volumes, located in Woodburn Hall; and the Willey Library, a valuable collection of about 1,500 volumes donated to the University by the heirs of the late Senator W. T. Willey, has been placed in the document room and opened to the public for reference use.

The library of the Agricultural Experiment Station, containing valuable sets of chemical journals and other technical material, may also be consulted by members of the University.

The library building is entirely of stone, fire-proof, and contains ample reading and reference rooms, which are abundantly lighted and well furnished with modern library appliances. The book room is supplied with metal stacks, which hold 20,000 volumes. On the upper floors of the building are rooms for government documents and for class work.

The various libraries connected with the University contain in the aggregate more than 40,000 volumes.

LABORATORIES

There are thirty-one laboratories connected with the University. Three of the biological laboratories are located in Woodburn Hall, two being devoted to zoology and one to physiology. The botanical and bacteriological laboratories are situated in North Fife

Cottage. South Fife Cottage is devoted entirely to the anatomical laboratories. The veterinary laboratory is located in the basement of Martin Hall. The laboratories of the physical sciences are placed in Science Hall. The space for physics and elementary electrical engineering occupies most of the basement and first floor, the chemical laboratories the second floor and a portion of the third floor and the geological laboratory and museum the remainder of the third floor. Students also have access to the state geological collection, which at present occupies part of the second floor of the Library.

The College of Agriculture and Experiment Station have ample facilities. There are two experiment dairies, one in the basement of Martin Hall, the other, recently completed, at the Station Farm. The Experiment Station contains a laboratory for work in plant pathology, two well equipped chemical laboratories and an entomological laboratory with its accompanying valuable collection of specimens. The greenhouses adjoining the Station afford facilities for the experimental work of the departments of botany and horticulture.

The laboratories of the College of Engineering are all grouped in Mechanical Hall. They consist of the mechanical and steam laboratories connected with the power plant equipment, the electrical laboratory, the testing laboratory, the hydraulic laboratory, the wood-working shop, the machine shop, the sheet-metal and pipe-fitting shop, the forge shop, and the foundry. In addition to these there are two large, well lighted and well equipped drawing rooms, and a blue printing room.

More extended statements as to the extent and equipment of these laboratories, as well of the studios of the schools of music and fine arts will be found in connection with the announcements of the different departments in other parts of this catalogue.

PHYSICAL TRAINING

Gymnasium

For the physical training of students excellent opportunities are offered by the gymnasium. It is furnished with a complete anthropometric equipment, baths, dressing room, lockers ,and all kinds of apparatus usually found in modern gymnasiums. In all the work the aim is to develop health, strength and vitality, and such special exercises are prescribed as may be necessary to symmetrical development.

Young women have the same advantages in the gymnasium as young men, certain hours being reserved and regular classes formed for them.

Athletics

The department of athletics, as now organized, is under the supervision of a director, who is assisted by a coach. Football, base-ball, basket-ball, track and tennis teams are organized and trained each season. Two field days are held annually, one in the fall and one in the spring. Indoor meets are held during the winter term for the class championship. The athletic field is provided with a grand-stand, which adds greatly to the enjoyment and profit of athletic sports. All field sports are under the control of the athletic board of control which is made up of the faculty committee on athletics and five representatives of the student body, chosen from the various classes of the University. The University is a member of the Intercollegiate Athletic Association of Western Pennsylvania and West Virginia and of the Intercollegiate Athletic Association of the United States.

UNIVERSITY FEES AND EXPENSES

In the College of Arts and Sciences and in the College of Agriculture tuition is free to West Virginia students. For students not residents of West Virginia the tuition fees are $20.00 per quarter, or $50.00 per year.

In the College of Engineering the tuition fees are $8.00 per quarter, or $20.00 per year, for resident students, and $20.00 per quarter, or $50.00 per year, for non-resident students.

In the College of Law and the College of Medicine the tuition fees are $10.00 per quarter, or $25.00 per year, for resident students, and $20.00 per quarter, or $50.00 per year, for non-resident students.

The matriculation fee is $5.00, payable upon entering the University by all students except cadets and those whose work is exclusively in music or art. This fee is paid but once by each student unless he remains out of the University more than three years.

The contingent fee is $2.00 per quarter, payable at the beginning of the quarter by all students except cadets.

The athletic fee is $2.00 per quarter for the fall and spring quarters and $1.00 for the winter quarter, payable at the beginning of each quarter by all students.

A fee of $2.00 each term is charged for registration and the issuance of class cards. This fee is remitted to all students who procure class cards during the first three days of the fall quarter, the first day of the winter quarter, and the first day of the spring quarter. It is exacted in all other cases. Class officers will issue class cards only on presentation of the ticket from the registrar and

the bursar, and, after the limit of time mentioned, this ticket must bear the bursar's receipt for this fee. Students whose work is exclusively in music or art, or in both, are excused from payment of the $2.00 registration fee.

The diploma fee is $5.00, payable by all students at the beginning of the quarter in which they expect to receive their degree or diploma.

A tuition fee of $10.00 per quarter is charged all students in the courses of music.

Any student in the School of Music who is not a resident of West Virginia, and who pays at least $16.00 a quarter for music, is permitted to take in addition to music one credit course each quarter free of charge, or two credit courses as one-half the usual charges, but in either case such student shall pay the contingent fee of $2.00 a quarter.

A fee of $1.00 is charged for furnishing a copy of a student's record in the registrar's office after the regular quarterly reports have been issued.

Students in laboratory courses pay special fees to cover the cost of materials used.

BOARD AND LODGING

Board and lodging together may be obtained in Morgantown for $3.50 per week. Most students, however, pay from $3.75 to $4.50 per week. Furnished rooms may be obtained in private families at from $1.00 to $1.25 per week. Board in students' clubs costs from $2.50 to $3.00 per week; in private families, from $3.00 to $4.00.

ESTIMATED EXPENSES FOR A YEAR OF NINE MONTHS

Room rent	$ 36.00	to	$ 45.00
Board	100.00	to	120.00
Washing	9.00	to	13.00
Text-books	8.00	to	30.00
Contingent and athletic fees	6.00	to	11.00
	$159.00		$219.00

To this estimate must be added matriculation, tuition, diploma, and laboratory fees, in the case of students who are required to pay them, traveling expenses, clothing, and miscellaneous expenses, which depend largely upon the tastes and habits of individual students.

Text-books are kept for sale in the University book store and are furnished to students at cost.

State cadets are furnished their text-books, stationery, and uniforms free and are exempt from the payment of matriculation, contingent, and athletic fees.

ACCREDITED AND RECOGNIZED PREPARATORY SCHOOLS

The University is a part of the public school system of the state and desires that its relations with the other parts of the system be as close and intimate as possible. The committee on classification and grades has full charge of all matters pertaining to accredited and recognized schools. School superintendents, principals, or boards, desiring to have their schools placed on the accredited or recognized list, should make application to Professor J. N. Deahl, sub-committee on accredited and recognized schools.

Diplomas or certificates of a general nature will not be accepted, but certificates setting forth the work of the student in detail will be required in every case. The University provides a special form for this certificate, copies of which may be obtained at any time upon application to the President of the University or the chairman of the committee on classification and grades. A supply should be kept on hand by the principal of each accredited or recognized school.

ACCREDITED PREPARATORY SCHOOLS

Accredited schools are those which offer a sufficient amount of work to admit their students to the freshman class in the College of Arts and Sciences*. Eligibility to the list of accredited schools depends on the quantity and quality of the work done. The following provisions concerning the quality of the instruction must be complied with:

1. The scholastic attainments of teachers in accredited schools must be equivalent to that of a gradaute of a standard college and should include professional preparation and some special training in the subjects they teach.

2. The number of daily periods of class room instruction given by any one teacher should not exceed five.

3. The faculty should consist of not fewer than three teachers

---

*As the requirements for admission to the College of Engineering are all prescribed, it is possible that a graduate of an accredited school may not have some of the prescribed work, and so not be able to enter the freshman class in that college.

exclusive of the superintendent of schools, except in cases where the number of students does not exceed thirty or forty.

4. Laboratory and library facilities must be adequate to meet the needs of instruction.

The list of accredited schools is as follows:

Alderson Academy.....Alderson, W. Va.
Allegheny County Academy .....Cumberland, Md.
Allegheny Collegiate Institute .....Alderson, W. Va.
Bluefield High School .....Bluefield, W. Va.
Broaddus Classical and Scientific Institute.....Philippi, W. Va.
Charleston High School .....Charleston, W. Va.
Clarksburg High School .....Clarksburg, W. Va.
Clay District High School .....Shinnston, W. Va.
Connellsville High School .....Connellsville, Pa.
Elkins High School .....Elkins, W. Va.
Fairmont High School .....Fairmont, W. Va.
Grafton High School .....Grafton, W. Va.
Hinton High School .....Hinton, W. Va.
Huntington High School .....Huntington, W. Va.
Keyser High School .....Keyser, W. Va.
Linsly Institute .....Wheeling, W. Va.
Mannington High School .....Mannington, W. Va.
Martinsburg High School .....Martinsburg W. Va.
Morgantown High School .....Morgantown, W. Va.
Morris Harvey College .....Barboursville, W. Va.
Moundsville High School .....Moundsville, W. Va.
Parkersburg High School .....Parkersburg, W. Va.
Pittsburg Central High School .....Pittsburg, Pa.
Ronceverte High School.....Ronceverte, W. Va.
Salem College .....Salem, W. Va.
Scottdale High School .....Scottdale, Pa.
Sistersville High School .....Sistersville, W. Va.
State Normal School .....Athens, W. Va.
State Normal School .....Fairmont, W. Va.
State Normal School .....Glenville, W. Va.
State Normal School .....Huntington, W. Va.
State Normal School .....Shepherdstown, W. Va.
State Normal School .....West Liberty, W. Va.
Southwestern State Normal School .....California, Pa.
Tyler County High School.....Middlebourne, W. Va.
Uniontown High School .....Uniontown, Pa.
Wheeling High School .....Wheeling, W. Va.

RECOGNIZED PREPARATORY SCHOOLS

Recognized preparatory schools are those whose graduates have not had a sufficient number of credits to admit them to the freshman class, but receive credit toward admission for the work certified.

Belington High School ..... Belington, W. Va.
Buckhannon High School ..... Buckhannon, W. Va.
Cameron High School ..... Cameron, W. Va.
Charles Town High School ..... Charles Town, W. Va.
Ceredo High School ..... Ceredo, W. Va.
Chester High School ..... Chester, W. Va.
Claysville High School ..... Claysville, Pa.
Davis Free School ..... Piedmont, W. Va.
Fayetteville District High School ..... Oak Hill, W. Va.
Harrisville High School ..... Harrisville, W. Va.
McMechen High School ..... McMechen, W. Va.
Mt. Wesley High School ..... Berkeley Springs, W. Va.
New Cumberland High School ..... New Cumberland, W. Va.
Pennsboro High School ..... Pennsboro, W. Va.
Perryopolis High School ..... Perryopolis, Pa.
Piedmont High School ..... Piedmont, W. Va.
Point Pleasant High School ..... Point Pleasant, W. Va.
Ravenswood High School ..... Ravenswood, W. Va.
Salem High School ..... Salem, W. Va.
Sutton High School ..... Sutton, W. Va.
Terra Alta High School ..... Terra Alta, W. Va.
Williams District High School ..... Williamstown, W. Va.

ADMISSION TO THE UNIVERSITY

METHODS OF ADMISSION

Students are admitted to the University either by examination or on certificate from an accredited preparatory school. In the latter case the certificate must set forth the work of the student in detail and diplomas or certificates of a general nature will not be accepted.

Candidates for admission to the University must present certificates of good moral character and, if from other colleges or universities, must present letters of honorable dismissal.

Candidates for admission who come from other institutions of learning without letters of honorable dismissal may, at the discretion of the registrar, be allowed to matriculate provisionally. In

every such case, the registrar will himself make immediate inquiry of the institution from which the applicant comes concerning his standing as a student in that institution. If a certificate of honorable dismissal cannot be obtained, the matriculation will be cancelled and all fees paid by the applicant will be returned.

The course of procedure above described will be followed also in cases of students from accredited schools, who offer themselves for matriculation without the regular certificate as prescribed above.

ENTRANCE CREDITS.

The requirements for admission to the various colleges of the University are stated in terms of units.

A unit in any subject represents the amount of work that may be done in a standard high school in a year of thirty-six weeks, with five recitation periods of forty-five minutes each, per week.

Certificates of entrance credits must be on the blank form prescribed by the committee on classification and grades, or on a similar form, so that credit values, in units, may be readily computed.

The chairman of the committee, or any member acting in his stead, may list and certify the credits of any applicant for admission to the University when such credits are from an accredited school and in proper form, and are of sufficient value in units to entitle the applicant to classification as a freshman, or first year classman. Certificates from schools not on the accredited list must be approved by the committee.

MATRICULATION AND REGISTRATION.

In order to gain admission to the University, the student must first report at the President's office in Woodburn Hall. A blank will be furnished, which, on being signed, will be taken to the registrar. That officer will then assign the student to a class officer, and will certify to the treasurer the fees, if any, which are to be paid. On the payment of these fees, the student will be assigned to the proper classes by his class officer. No student is permitted to become a member of any class until his registration is completed.

All students are required to register at the beginning of each term.

SPECIAL STUDENTS.

Persons who are not able to satisfy all entrance requirements,

or who do not desire to become candidates for a degree, may be admitted as special students, subject to the following provisions:

1. Special students must as a rule be twenty years of age or over. Only in exceptional cases will permission be given to applicants under that age.

2. Special students must satisfy at least nine units of the requirements for admission, including two units of English. If the applicant is unable to satisfy the nine units required, he must register in the Preparatory School.

3. Every application for admission as a special student must be in writing, and must set forth fully the applicant's reasons, together with a detailed statement of the studies he desires to pursue.

4. Special students are subjected in all respects to the usual rules relating to registration and scholarship. They may be assigned to classes for which they apply, it being understood, however, that admission to any class rests entirely with the instructor in charge, and further, that admission to any class when so granted does not necessarily imply credit for prerequisites.

5. Special students shall not have their work certified for credit to any other institution, but a general statement of work done may be given if applied for; in every case, this statement shall show that the work was done under registration as a special student, and in case the full requirements for admission to the University have not been satisfied, the statement shall set forth that fact.

ADVANCED STANDING

1. All applications for advanced standing in college work must be made to the committee on classification and grades not later than two weeks after the applicant's registration. When certificates of work done elsewhere are offered, the committee will consider them, and, if they are adjudged sufficient, the credits they call for will be certified to the registrar by the chairman of the committee. If no certificates are offered, or those offered are not considered sufficient for the credits asked, the applicant will be sent by the committee to the heads of the departments in which credit is sought, who will report, after examination, to the committee, on the form furnished, the numbers, names, and values of the courses, if any, for which the applicant is entitled to credit. The applicant shall, at the discretion of the committee, have the privilege of presenting his certificates to the heads of the departments, who may give them such recognition in connection with the examination as they see proper. When the credit to be given, if any, has been determined, it shall be reported by the head of the department to the

chairman of the committee, on the form provided, always under seal, and in no case must information of such credit be given to the applicant before the report has been sent to the committee. Before credits in this way are certified to the registrar, all certificates must be returned to the chairman of the committee, and by him placed on file.

SCOPE OF THE ENTRANCE REQUIREMENTS

The following description indicates the extent of preparation expected in each of the several subjects offered for entrance credit for admission to the various colleges of the University.

ENGLISH

Grammar and Elementary English.—No student will receive entrance credit in English whose work shows marked deficiency in spelling, punctuation, grammar, sentence structure, or paragraphing. The student should be prepared to state intelligibly the essential principles of English grammar and to explain the syntactical structure of any sentence encountered in his reading. An elementary textbook on grammar should have been completed before the student enters upon his high school course. For more advanced study of the subject and for practical review the material presented in the ordinary high school, textbooks on rhetoric may be utilized. The subject should be constantly reviewed in connection with the work in composition during the four years of the high school course.

Rhetoric and Composition.—Systematic practice in theme writing and other forms of oral and written composition with instruction in the principles of rhetoric and the forms of discourse must form an important part of each unit of English. Students who are not able to express themselves in clear, correct, and idiomatic English will not be given full credit. The subjects upon which the student writes should not be drawn exclusively from literature. A considerable portion of them should be so distributed as to give proper training in the various forms of discourse.

The three units in English should include the following:

(a) One unit. English Classics and English Composition. The thorough study of at least five Englisb classics selected from the list below. The simplest narrative classics, both prose and poetry, should be selected. The aim of the work should be to stimulate interest in good literature and to enable the student to form vivid

mental pictures and to understand fully the thought expressed. The aim of the composition work should be to secure facility and accuracy. The work should include letter writing, short themes in narration and description, paragraphing, and sentence structure.*

(b) One unit. English Classics and English Composition. Thorough study of five other English Classics should include more complex forms of fiction and narrative poetry, simpler essays, and at least one of Shakespeare's plays. The aim should be to make a study of the form structure, style, and purpose of the selection; the author's life; relation of the selection to its age and to other works of similar type. The work in composition should include themes of moderate length in all the forms of discourse; unity, coherence, and emphasis in sentences and paragraphs; kinds of sentences; diction; figures of speech.

(c) One unit. Advanced study of Classics; Rhetoric. A thorough and intensive study of the form, structure, and style, of at least one typical example of the novel, the drama, the lyric or epic poem, and the essay. A study of the principles of rhetoric, employing some good advanced high school textbook, with frequent and systematic theme writing must form a part of this unit.

The following list of classics is suggested for reading and study:

For the first unit: Longfellow's Evangeline and Courtship of Miles Standish; Whittier's Snow Bound; Lowell's Vision of Sir Launfal; Coleridge's Rime of the Ancient Mariner; Macaulay's Lays of Ancient Rome; Goldsmith's Deserted Village; Irving's Sketch Book; Hawthorne's Twice Told Tales; Franklin's Autobiography; Aldrich's Story of a Bad Boy; Warner's Being a Boy, A Hunting of the Deer, etc.; Burrough's Sharp Eyes, Birds and Bees, etc.; Dickens' Christmas Carol; Stevenson's Treasure Island.

For the second unit: Scott's Lady of the Lake, Marmion, Ivanhoe, Quentin Durward; George Eliot's Silas Marner; Goldsmith's Vicar of Wakefield; Mrs. Gaskell's Cranford; Cooper's Last of the Mohicans; Blackmore's Lorna Doone; Dickens' Tale of Two Cities, David Copperfield; Arnold's Sohrab and Rustum; Byron's Mazeppa and the Prisoner of Chillon; Shakespeare's Merchant of Venice, As You Like It, Julius Caesar, Twelfth Night; Addison's De Coverly Papers; Thoreau's Succession of Forest Trees; Stevenson's Inland Voyage.

For the third unit: Novels: Thackeray's Henry Esmond; George Eliot's Silas Marner or Romola; Jane Austen's Pride and Prejudice; Hawthorne's House of the Seven Gables. Dramas: Shakespeare's Macbeth, Lear, or Henry V. Poems; Tennyson's Idylls of the King; Milton's Shorter Poems; Browning's Selected Poems; Palgrave's Golden Treasury. Essays: Lamb's Essays of Elia; Emerson's Essays; Ruskin's Sesame and Lilies; Carlyle's Heroes and Hero Worship, Essay on Burns; Macaulay's Essay on Addison, Life of Johnson; Washington's Farewell Address; Webster's Bunker Hill Oration; Lincoln's Gettysburg Speech, etc.

---

*Reading of good literature outside of class and memorizing of notable passages in prose and verse should be required but outside reading accompanied by written reports or reviews made according to a stereotyped model in place of a thorough study of assigned lessons, class instruction and discussion will not be considered as satisfactory fulfilling the requirement of any unit.

LATIN

(a) One unit—Such knowledge of inflection and syntax as is given in any good preparatory Latin book, together with the ability to read easy selections from Caesar.

(b) One unit—Four books of Caesar's Gallic War, or its equivalent in Latin of equal difficulty. The ability to write simple Latin based on the text.

(c) One unit—Six orations of Cicero. The ability to write simple Latin based on the text. The simpler historical references and the fundamental facts of Latin syntax.

(d) One unit—Six books of Virgil, with history and mythology. Scansion of hexameter verse. Two of the three prescribed units to be offered must be (a) and (b). Either (c) or (d) may be offered for the third unit, but one year of composition must be included.

GREEK

(a) One unit—Introductory lessons, elements of grammar; easy translations from the Anabasis; translations into Greek of easy continuous prose based upon the Anabasis.

(b) One unit—Xenophon—the first four books of the Anabasis.

(c) One unit—Homer—The first three books of the Iliad (omitting II-494 to end) and the Homeric constructions, forms, and prosody; constant practice in sight translation and prose composition.

GERMAN

(a) One unit—A thorough knowledge of elementary syntax; constant drill in pronunciation, oral translation, and composition; translation of seventy-five to one hundred pages; advanced syntax; composition throughout the year.

(b) One unit—Modern prose and familiar poems, two hundred pages; advanced syntax; intermediate composition throughout the year.

(c) One unit—Advanced prose, four hundred pages; advanced composition throughout the year.

FRENCH

(a) One unit—(1) The essential principles of French etymology and syntax, and, especially, a thorough knowledge of the pronoun and of the regular and irregular verb; (2) ability to write in French, sentences of moderate difficulty; (3) the reading of from

one hundred and fifty to two hundred pages of modern French prose; (4) ability to pronounce the language correctly and with some fluency.

(b) One unit—(1) Continued systematic study of French Grammar, including syntax; (2) the reading of from three to four hundred pages of modern French; (3) the practice in writing from dictation.

(c) One unit—(1) Twenty pages of advanced prose composition; (2) the reading of from four to six hundred pages of French, including three plays of Corneille and three of Racine.

HISTORY

From one to three units may be offered, selected from the following:

(a) Ancient History to 800 A. D.—one unit.

(b) Mediaeval and Modern European History—one-half to one unit. The amount of credit will depend upon the time given to the subject.

(c) English History—one-half to one unit. The amount of credit will depend upon the time given.

(d) American History, or American History and Civics—one unit.

The student should be familiar with the important events of the period of history which he offers for credit, and should have a clear knowledge of the general development.

A whole year that covers the whole field of general history with a good text-book and with notes on collateral reading and preparation of maps will be accepted as one unit, although it is believed that better results will be obtained by spending a whole year on ancient history and another year on the mediaeval and modern period.

American history and civics should be preceded by English history, and should not be given before the third year in the high school course, in case three years are given to history. Ancient history should be followed by English history in case mediaeval and modern history are not given.

The study of civics must not precede the study of American history; and, if studied as a separate branch following the course in American history, some advanced text such as Forman's Advanced Civics should be used. An outline knowledge of elementary civics, such as is presented in Forman's First Lessons in Civics, or in Peterman's Civics, is presupposed.

MATHEMATICS.

(a) Algebra through quadratics—one unit. The four fundamental operations for rational algebraic expression; factoring, highest common factor, lowest common multiple, complex fractions, solution of equations of the first degree, radicals including the extraction of the square root of polynominals and numbers, fractional and negative exponents, quadratic equations, and equations containing one or more quadratic equations, and problems involving the use of such equations.

(b) Plane geometry—one unit. The completion of any standard text with original exercises and problems.

(c) Algebra—one-half unit. Review of essentials followed by ratio and proportion, the binominal theorem for positive and integral exponents, arithmetical and geometrical progressions.

(d) Solid geometry—one-half unit. Properties of straight lines and planes, dihedral and polyhedral angles, projections, polyhedrons, including prisms, pyramids, and the regular solids, cylinders, cones, and spheres, spherical triangles, measurements of surfaces and solids.

(e) Plane trigonometry—one-half unit. Definitions and relations of the six trigonometrical functions as ratios, proofs of important formulae, theory of logarithms and use of tables, solution of right and oblique plane triangles.

SCIENCE

(a) Physics—one unit. Credit will be given for one year's work with any standard text book, upon the presentation of a satisfactory note book, covering at least thirty-two experiments. The note book should contain the student's own record of his laboratory experiments and a signed statement from his teacher that the book is the original record of the student's observations. Students deficient in laboratory work may make up this deficiency in the University.

(b) Chemistry—one unit. Credit will be allowed for the completion in a satisfactory manner of any standard elementary text in inorganic chemistry, accompanied by individual laboratory work. A full year should be given to the work.

(c) Botany—one unit.

(d) Zoology—one unit.

Work in either botany or zoology, to be credited must have been accompanied by individual laboratory work. The exact extent of the work which should be done cannot be stated here, but, for the

maximum credit, it should be as much as a competent teacher, trained in laboratory methods, can accomplish in from one, to one and one-half years. In estimating the time employed, two hours of laboratory work will be counted as the equivalent of one recitation period. It will be necessary for applicants to present their laboratory notes and drawings.

In botany the class should cover the ground of Coulter's "A Text-Book in Botany," or Bergen's "Foundation of Botany," or their equivalent.

In zoology the class work should cover about what is represented in Kellogg's "Elementary Zoology" (Henry Holt), or in Parker and Haswell's Zoology, one-volume edition (Macmillan & Co.). The amount of laboratory work that should be done is somewhat less than is outlined in Scheffer's manual (Blakiston).

(e) Physical Geography—one-half unit.

(f) Physiology—one-half unit.

Credit for one-half unit each in physical geography and physiology will be allowed—as elective only—if taught in a scientific manner in an accredited or recognized secondary school. The use of a standard text should be supplemented by proper illustrative methods and proper observation. One-half year must be given to each subject.

DRAWING

One unit. To receive entrance credit in free hand drawing, instruction should have been designed to give the student an intelligent and accurate conception of form, light, and shade, and the ability to express simply and directly, such objects as natural and geometrical form, still life, architectural details, and casts from nature, the antique, and life.

The training of the eye to observe with understanding, rather than the teaching of any particular method of expression, should be the aim of the instructor. No mechanical aids should be employed. The pencil is recommended as the simplest and most convenient medium for elementary work. It is desirable that students seeking credit for drawing shall submit their work in addition to their general certificate.

AGRICULTURE

One-half to one unit—A study of soils, plants, grasses, cereals, insects, farm animals, feeding, gardening, etc. The experimental and demonstration work should be equivalent to one full year of laboratory work. Standard texts for class work and for laboratory guides should be used.

RULES GOVERNING CLASSIFICATION AND SCHOLARSHIP

THE CLASS OFFICER

The duties of the class officer are as follows:

1. To assign the student to proper courses, and see that prescribed work is taken in order.

2. To supervise the selection of elective courses by the student.

3. To keep a record of the work done by the student and to recommend him for his degree or diploma when the work is completed.

4. To have general oversight of the student's college life. The student will look to his class officer for advice and guidance in all matters pertaining to his work. Withdrawal from classes, changing from one class to another, etc., will always require the class officer's consent.

COURSES

1. A course represents the amount of work done in one quarter (twelve weeks), in five recitation hours and ten preparation hours a week.

2. The maximum number of courses which any student may take is four; the minimum, three.

3. When a student registers for four full courses in any quarter, the maximum number of full courses for which he may register the succeeding quarter is three.

4. No course for which credit has already been given shall be taken as one of the minimum number of courses prescribed, unless by special permission of the committee on classification and grades.

5. The committee will consider the question of granting permission to any student to take more than the prescribed amount of work only on the presentation of a petition approved and signed by the class officer, and accompanied by a statement of the student's record for the preceding quarter. Such petition must be presented within seven days after the day set in the catalogue for the opening of the quarter.

6. Fractional courses in the College of Arts and Sciences will not be counted until they amount to a full course.

7. Fewer than three courses in an ancient or a modern language will not be counted toward any University degree, diploma, or certificate until a third course in the same language has been taken.

CLASSIFICATION

1. No student shall be classified as a freshman or first year student who is conditioned in more than one unit of entrance requirements.

2. No student shall be classified as a sophomore or second year student until all preparatory conditions are removed, and credit for nine courses of prescribed freshman work, or for nine courses including the prescribed work, is obtained.

3. No student shall be classified as a junior or third year student until he has received credit for at least nineteen courses.

4. No student shall be classified as a senior or fourth year student until he has received credit for at least thirty courses.

5. Classification of students for publication in the catalogue shall be made on the basis of the work to their credit at the close of the fall quarter each year, except in the case of students entering later in the year.

SCHOLARSHIP

1. Students are graded on a scale in which one hundred per cent is regarded as perfect and seventy per cent as a passing grade.

2. If the final grade of any student for any course is below sixty, it shall be recorded as a "failure," and the student must take the course again if he desires credit for it. If the final grade is sixty, or over, but below seventy, it shall be recorded as a "condition," and the student shall have the privilege of a second examination, which must be taken at the time designated by the instructor, and applied for not later than ten days after the opening of the succeeding quarter. A condition not removed within the term following the one in which it was imposed becomes a failure. If the final grade after a second examination is again below seventy, it shall be recorded as a "failure."

3. If a student fails to register promptly at the beginning of any quarter, a deduction of two per cent from the final grade in every subject shall be made for each exercise missed, for all absences not more than seven in number, unless such absences are excused by the committee. If the absences are more than seven in number, full credit for the course will not be given, unless such absences are excused by the committee and the work missed made up to the satisfaction of the instructor.

4. Punctuality in attendance and attention to the work of the classroom will be given much consideration in determining the class standing of the student. Every unexcused absence will effect

a reduction of two per cent in the student's class standing in the course.

5. The permission of both class officer and instructor shall in all cases be necessary for the withdrawal of a student from any class, and after six weeks of any quarter have elapsed, the permission of the committee on classification and grades must also be obtained.

If a student discontinues a course without permission as above, the standing shall be reported to the registrar as zero. If the student attends the course throughout the quarter and is absent from examination, without permission, the instructor shall count the examination as zero, and report the final grade as one-half the recitation grade. If the student is unavoidably absent from examination, and has a recitation grade of eighty-five or over, the instructor may report the recitation grade as the final grade in the subject. If the recitation grade is under eighty-five, and the absence from examination is for reasons satisfactory to the instructor, the fact will be recorded on the card returned to the class officer, and the student shall have the privilege of taking the examination at a later time.

In every case, except as above, the class card must bear a final grade, and the class officer's report to the registrar must show a final grade.

All instructors are required to report at the end of each term grades in all courses taken with them, and not hold them over to a later term or report them as incomplete.

6. Any student who fails to make a standing of sixty per cent in each of two or more subjects, or who fails to make the average standing of sixty per cent in all of his courses for any quarter, shall be suspended from the University for the succeeding quarter. If however, the failure as above is due to the abandonment of any class, or withdrawal from the University without permission, or to absence from examination without reasonable excuse, the suspension shall be indefinite. If a student suspended for any quarter by the operation of this rule re-enters the University and again becomes subject to it, his suspension shall be indefinite.

The committee on classification and grades will relieve any student from the operation of this rule for satisfactory reasons. The student asking for relief must, when possible, appear before the committee in person; a statement from the student's class officer and instructors concerned will also be required.

7. In case of the withdrawal of a student from the University, the class officer shall report the fact in writing to the committee on classification and grades, together with a full statement of the reasons for such withdrawal and circumstances attendant thereon. If in the judgment of the committee the reasons given for with-

drawal are insufficient, the student will be dealt with as subject to the sixty per cent rule. (See rule 5 above.)

8. A report of each student's work is made at the close of every quarter, either to the student himself or to his parent or guardian. A complete record is also kept in the registrar's office. The fee for making a copy of this record after the quarterly reports have been sent out is one dollar.

THESIS

If a thesis is required by the class officer of a candidate for the bachelor's degree, the student will observe the following regulations:

Theses must be typewritten with black non-copying record ink, on Crane's Japanese linen paper, of quality 24 pounds to the ream, folio size. This paper, of right quality and correct size, viz., 8x10 inches, may be obtained at the University book room, or at any book store in Morgantown. There must be a margin of one and one-fourth inches at the left edge of each sheet, and a margin of three-fourths of an inch on the other edges. The title page should follow, *mutatis mutandis*, the sample title page on the bulletin board in the Library.

When the thesis is typewritten and ready for binding, the student will secure the written approval of the professor, under whose direction the thesis has been prepared, and the librarian's receipt for the thesis fee. The thesis will then be presented to the committee on classification and grades. The thesis must be in the hands of this committee at least thirty days before the date on which the degree is to be conferred.

The committee on classification and grades will not receive a thesis from any student until he has received credit for thirty-four college courses.

GENERAL INFORMATION

DISCIPLINE

The rules and regulations which students are required to observe are few, simple, and reasonable:—civil and orderly conduct; punctuality and regularity in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed, and abstinence from drinking, gambling and like gross vices.

Students who do not comply with these requirements will not be allowed to remain in the University.

All matters of discipline are in charge of the University Council.

CHAPEL EXERCISES

The regular University chapel exercises consist of singing, reading the Scriptures, and prayer. The service is conducted by the chaplain of the University, or by some one designated by him. The singing is in charge of the director of the School of Music. Attendance upon chapel exercises is voluntary; but patrons of the University who wish the students under their charge to attend these exercises may have them enrolled by making such desire known to the University chaplain.

CHRISTIAN ASSOCIATIONS

The Young Men's Christian Association of West Virginia University is organized for the purpose of encouraging active Christian work among its members, and of promoting the spiritual growth of all the young men of the University. Regular meetings are held every Friday epening at 6:45 o'clock in the Association Room. All young men of the University who are Christians are eligible to active membership in the Association; any male student may become an associate member.

Systematic courses in Bible Study are offered which cover the four years of college life. The classes are small in size, informal in character and afford opportunity for every man to strengthen his own religious convictions.

Special courses are also offered in the study of Christian missions. Any man who takes such a course cannot help having his vision of life broadened to include the whole world.

Delegates are sent each year to the State and International student conventions. Mr. E. H. Munson is the General Secretary of the Association and gives his full time to the work. The Y. M. C. A. office is located on the third floor of Martin Hall. All the cabinet and committee meetings are held in this office.

The administrative policy of the Association is directed by an Advisory Board composed of members of the faculty, business men of the town, alumni and students.

Membership in the Young Women's Christian Association is open to young women of the University on the same terms as those stated above for the Young Men's Christian Association. Regular devotional meetings are held every Friday at 4 p. m. in Columbian Hall.

OTHER SOCIETIES

1. The Columbian Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

2. The Parthenon Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

3. The University Dramatic Club. The purpose of this organization is to stimulate an interest in literary and dramatic work in the University. This it accomplishes through the practical and systematic study of standard plays, and through the public presentation of at least two plays in each college year. All University students are eligible to membership in the Dramatic Club, but those desiring to enter must pass a series of tests under the direction of the professor of elocution and oratory.

4. The Choral Society. Regular meetings every Monday at 7:30 p, m, in Commencement Hall. Membership open to all students in the School of Music and all others interested.

5. The Athletic Association. Organized for the purpose of encouraging and developing the athletic interests of the University. Incorporated under the laws of West Virginia. Membership open to all students of the University.

6. The Students' Publishing Association. Organized for the purpose of publishing the college papers. At present there are published the Athenaeum, a weekly newspaper, and the Monongalian, a quarterly literary magazine.

7. The Engineering Society. Regular meetings the first and third Friday nights of each month in its room in Engineering Hall. Membership open to all students in the College of Engineering and Mechanic Arts.

8. The University Grange, Number 372, Patrons of Husbandry. Regular meetings every Tuesday night. Membership open to all students in the College of Agriculture and to others who may be elected.

9. The English Club. Regular meetings on the first Thursday night of every month.

10. The Beowulf Gedriht. Regular meetings in October, November, February, April and May. Open to all members of the University upon the fulfillment of certain scholarship qualifications.

The fraternities of the University hold their meetings Tuesday night of each week at 6:30 o'clock.

PRIZES

All contestants in any of the contests in oratory, declamation,

or debate, must have received credit for at least one course in elocution.

No composition, in whole or in part, shall be submitted in competition for two prizes.

Only undergraduate students are eligible for any prize offered.

No student shall be eligible to enter any contest, who has not been a resident student in this University for at least one quarter preceding the quarter in which the contest is to be held, and who is not a resident student in good standing in the University in the quarter in which the contest is held.

No successful contestant may become for a second time a competitor for the same prize.

If in any contest there are fewer than two competitors, no prize will be given in that contest.

Students intending to compete in any essay-writing contest must notify the chairman of the committee on ways and means not later than March 15. Three typewritten copies of each essay must be in the hands of the chairman of the committee not later than May 15.

The conditions upon which the awards in the several contests are made may be learned upon application at the President's Office, or to the members of the committee on ways and means.

The following prizes are open to students in various departments of the University:

I. The Inter-Society Prizes

Prizes aggregating one hundred and fifteen dollars are awarded annually by the board of regents of the University to the literary society whose representatives excel in declamation, original oratory, essay-writing, and debate.

II. The Regents' Prize in Composition

A prize of fifty dollars is awarded annually by the board of regents of the University to the student in any one of the regular college courses who shall write the best essay on a topic selected by the committee on ways and means. The subject for 1910-11 is "The Achievements and Value of Polar Exploration."

III. The James F. Thompson Prize in Anatomy.

A prize of twenty-five dollars, the gift of Mr. James F. Thompson, of Martinsburg, W. Va., will be awarded annually to the undergraduate student who does the best work in anatomy for three quarters.

IV. The Edward Thompson Company Prize

The Edward Thompson Company offers for the year 1910-11 to the student in the senior law class who shall write the best essay on some subject in law, to be selected by the faculty of the College of Law, a prize, consisting of a set of Encyclopedia of Pleading and Practice, in twenty-three volumes. The value of this work is $138.00.

V. The Bryan Prize in Political Science

The Hon. William J. Bryan has given a sum of money, the annual income of which is to be offered as a prize to the student in the University who shall write the best essay on some subject in the science of government. The amount of the prize for the present is fifteen dollars. The subject for 1910-11 is "Conservation of Natural Resources." The subject is to include the various methods employed by our federal government and the success achieved by these. The need of conservation is not to be discussed.

VI. The Tax Commission Prize

The members of the State Tax Commission of 1902, W. P. Hubbard, Henry G. Davis, John K. Thompson, L. J. Williams, and J. H. Holt, have donated the sum of $1,350, the income of which is to be used as a prize for the "best original work bearing on matters of taxation in West Virginia." The conditions of competition are determined by the University Council. The amount of the prize at present is $70.00. For the year 1910-11 this prize will be given for the best essay on the subject, "The Expediency of a Federal Income Tax."

VIII. The Russell Love Morris Prize in Civil and Mining Engineering

Russell Love Morris, C. E., Professor of Civil Engineering, offers a prize of fifty dollars annually to the student in the department of civil and mining engineering who presents the best thesis on some subject of special application to the needs and resources of West Virginia.

WOMAN'S HALL

At the meeting of the Board of Regents in June, 1907, it was decided to lease the building formerly known as Episcopal Hall as a dormitory for young women. The building was thoroughly reno-

vated and refurnished, and was opened to the young women of the University at the beginning of the fall term, 1907. It is centrally located at the corner of Willey and Spruce streets, and will accommodate between forty and fifty young women. As heretofore, Miss Susan Maxwell Moore, Dean of Women, is in charge of the Hall. Anyone desiring information as to prices, or available rooms in the Hall, will appy to Miss Moore.

BOARDING AND ROOMING PLACES

The matter of furnishing information to new students regarding suitable boarding and rooming places is in charge of the Y. M. C. A. and Y. W. C. A. of the University. On their arrival in Morgantown new students should come directly to Woodburn Hall where they will find complete lists of rooms and boarding places and also upper classmen who will help them in getting located and matriculated. During the opening days of the quarter committees from the two Christian Associations meet new students at trains and are ready to render them every assistance possible.

Young men desiring information in advance of their arrival in Morgantown may address the Secretary, Mr. E. H. Munson, Morgantown, W. Va. Young women may address Miss Pearl Hodges, 552 Spruce street, Morgantown, W. Va.

AID FOR STUDENTS

The Employment Bureau, organized by the University Y. M. C. A., undertakes to assist earnest and worthy students who are dependent upon their own efforts for the expenses of their education, to obtain various forms of employment in Morgantown. Prospective students desiring such aid should correspond with the general secretary, Mr. E. H. Munson, before entering the University, stating the kind of work desired and the nature of past experience in any occupation. The work consists largely in waiting table, caring for rooms and lawns, clerking in stores, stenographic services, etc.

There is also a faculty committee on aid for students which cooperates with the employment bureau in securing work for students.

The Young Woman's Christian Association has also established an employment bureau where the women of Morgantown who desire such help as a University woman can give, may become acquainted with the students who wish to work. The work offered is light housework, assisting at social functions, tutoring, mending, caring for children, sewing, etc. The remuneration depends upon the kind of work done.

TEACHER'S BUREAU OF INFORMATION

The Teachers' Bureau of Information, under the direction of the department of education, has for its aim:—

1. To keep a record of the graduates of the University who wish to teach, to gather information as to their academic and professional qualifications and personal fitness for school work, and to recommend for vacancies those who seem most likely to prove themselves efficient.

2. To keep a similar record of alumni who wish to be transferred to other positions.

3. To assist boards of educations and other school officials in securing teachers, and to co-operate with teachers' agencies in placing graduates of the University.

Students desiring recommendation for positions as teachers should do at least one year's work, or three courses, in education. Those desiring recommendation for a position in a normal school or as principal or superintendent of schools, should do at least two years' work, or six courses, in education.

No student is assured a position. General letters of recommendation are not given to students. Information obtained from professors and others is regarded as confidential. No charge is made for any services rendered. Blanks for registration will be furnished on application. The following is the committee on recommendation: President Purinton, Professor F. B. Trotter and Professor Deahl, secretary.

THE COLLEGE OF ARTS AND SCIENCES

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President and Professor of Philosophy*

JAMES SCOTT STEWART, M.S., *Professor of Mathematics, Emeritus*

POWELL BENTON REYNOLDS, D.D., *Chaplain and Professor of Economics and Sociology*

ALEXANDER REID WHITEHILL, PH.D., *Professor of Chemistry*

SAMUEL B. BROWN, A.M., *Professor of Geology and Mineralogy*

ROBERT ALLEN ARMSTRONG, A.M., *Professor of the English Language and Literature*

ALFRED JARRETT HARE, A.M., *Professor of the Latin Language and Literature*

CHARLES HENRY PATTERSON, A.M., *Professor of Rhetoric*

FREDERICK WILSON TRUSCOTT, PH.D., *Professor of Germanic Languages and Literatures*

HENRY SHERWOOD GREEN, LL.D., *Professor of the Greek Language and Literature*

JASPER NEWTON DEAHL, PH.D., *Professor of Education*

JOHN LEWIS SHELDON, PH.D., *Professor of Botany and Bacteriology*

JAMES MORTON CALLAHAN, PH.D., *Professor of History and Political Science*

ANTHONY WENCEL CHEZ, A.B., *Director of Physical Training*

JOHN HARRINGTON COX, A.M., *Professor of English Philology*

FREDERICK LAWRENCE KORTRIGHT, D.Sc., *Professor of Chemistry*

FRANK BUTLER TROTTER, A.M., *Professor of the Latin Language and Literature*

HARRY ANTHONY EATON, LL.B., *Professor of Military Science and Tactics, and Commandant of Cadets*

JOHN ARNDT EIESLAND, PH.D., *Professor of Mathematics*

ALBERT MOORE REESE, PH.D., *Professor of Zoology*

OLIVER PERRY CHITWOOD, PH.D., *Professor of European History*

C. EDMUND NEIL, A.B., *Professor of Elocution and Oratory*

CHAUNCEY WILLIAM WAGGONER, PH.D., *Professor of Physics*

WAITMAN BARBE, LITT.D., *Associate Professor of the English Language and Literature, and Assistant to the President*

WILLIAM JACKSON LEONARD, *Associate Professor of Fine Arts*

SIMEON CONANT SMITH, A.M., *Associate Professor of Rhetoric*

MADISON STATHERS, PH.D., *Assistant Professor of Romance Languages*

ARTHUR ROLLINS GRAVES, A.M., *Instructor in German*

ARLEIGH LEE DARBY, A.M., *Instructor in Romance Languages*

CLARENCE POST, A.B., *Instructor in Physics*

ARTHUR EVERETT FINNEY, A.B., *Acting Instructor in Romance Languages*

MABEL CONSTANCE FOSTER, *Assistant in Music*

LOUISE FERRIS CHEZ, *Assistant Director of Physical Training*

ENTRANCE REQUIREMENTS

For admission to the College of Arts and Sciences, the candidate must have credit for fifteen units, obtained by examination or on certificate from a duly accredited secondary school.

Of the fifteen units which must be offered for admission to the course leading to the degree of Bachelor of Arts, nine are definitely prescribed as follows:

		Units
English		3
Latin		2
History		1
Mathematics		2
Algebra	1	
Plane Geometry	1	
Science		1
Physics, Chemistry, Botany, or Zoology		
Total prescribed		9

The remaining six units must be chosen as electives from the following list:

		Units
Latin		1 to 2
Greek		2 to 3
German		2 to 3
French		2 to 3
Mathematics		½ to 1½
Algebra	½	
Solid geometry	½	
Plane trigonometry	½	
History and Civics		½ to 2
Physics		1
Chemistry		1
Botany		1
Agriculture		½ to 1
Zoology		1
Physical geography		½
Physiology		½
Drawing		1

A single unit of language will be accepted provided further work in that language is taken in the University.

For admission to the course leading to the degree of Bachelor of Science the requirements are the same as the foregoing, except that a modern language may be substituted for the two units of Latin prescribed and an additional unit of mathematics is prescrib-

ed—one-half unit of algebra and one-half unit of solid geometry or plane trigonometry.

For admission to the course leading to the degree of Bachelor of Science in Commerce the requirements are the same as the foregoing except that a modern language may be substituted for the two units of Latin prescribed, and one unit of accounting and one-half unit of physical geography are prescribed, thus leaving four and one-half units to be chosen as elective.

For a detailed statement of the amount of work required for each unit of entrance credit see page 37.

DEGREES

BACCALAUREATE DEGREES

There are three baccalaureate degrees conferred in the College of Arts and Sciences:

1. The degree of Bachelor of Arts.
2. The degree of Bachelor of Science.
3. The degree of Bachelor of Science in Commerce.

Number of Courses

The course is the standard for computing the amount of work required for graduation in the courses leading to these degrees. The course represents the amount of work done in one quarter (twelve weeks) in five recitation hours and ten preparation hours a week.

A baccalaureate degree in the College of Arts and Sciences is conferred upon any student who satisfies all entrance requirements and completes forty-two college courses selected in accordance with the following provisions.

Groups of Studies

The subjects of study are arranged in three groups:

I. LANGUAGE: English, Latin, Greek, German, French, Spanish, Italian.

II. SCIENCE: Mathematics and Astronomy. *Engineering, Physics, Chemistry, Geology, Botany, *Horticulture, *Forestry, *Agriculture, Zoology, *Entmology, *Anatomy and Physiology, Bacteriology, *Domestic Science.

III. PHILOSOPHY: Philosophy, Education, History, *Law, Political Science, Economics and Sociology, Commerce, *Music, *Fine Arts.

General Requirements

Major Study. When the student becomes a candidate for a degree he must select his major study from one of the above groups. Subjects marked with a star, however, cannot be chosen as majors. The work required in the major group is nine courses in one subject or six courses in one subject and three courses in another allied subject.

The head of the department to which the major subject belongs becomes the student's class officer. (See page 43.) When the student has selected his major subject, he will not be permitted to change to another major without the consent of the committee on classification and grades.

Minors. The student shall also select a minor study from each of the other two groups. The work required in each minor is six courses in one subject; or three courses in each of two allied subjects; or two courses in each of three allied subjects, provided in the last case, however, that the student has already offered work in these subjects for entrance credit.

Required English. English 10 and 11 are required of all candidates.

Special Requirements

For the degree of Bachelor of Arts:

(a) Ancient languages; In addition to the two units of Latin required for entrance, seven courses of ancient languages are required. The work may be seven courses in Latin, or four courses in Latin and three in Greek, or two courses in Latin and five in Greek.

(b) Modern languages: Three courses in a modern language are required.

For the degree of Bachelor of Science:

(a) Modern languages: Including the work offered for entrance a total of twelve courses in modern language is required, or, if two units of Latin were offered for entrance, nine courses in modern language are required. At least three courses each in French and German must be offered and at least six courses in some one language.

(b) Mathematics: Three courses in mathematics are required in addition to the units offered for entrance.

(d) The major study must be selected from the science group.

For the degree of Bachelor of Science in Commerce:

(a) Languages: Six courses in modern languages are required.

(b) Philosophy: Four courses in history (courses 19, 23, 26, 28, 29, or 35 may be offered); three courses in law (courses 2, 6 and 19); and three courses in economics are required.

(c) Science: Agriculture 4 and 5 and Geology 5 are required.
(d) The major study must be commerce.

Elective Studies.

The remaining course necessary to make up the total of forty-two courses required may be selected from any of the courses offered in the College of Arts and Sciences.

Suggested Schedule for Students in the A.B. Course

Freshman

	Fall	*Winter*	*Spring*
9:30	Latin or Greek	Latin or Greek	Latin or Greek
10:30	English 10	English 11	
11:30	Mathematics 7 or Science 1	Mathematics 8 or Science 2	Mathematics 9 or Science 3

The laboratory work of the science courses will be taken in the afternoon, or at other hours as arranged.

Sophomore

9:30	Latin French 1 or German 1	Latin, French 2 or German 2	Latin French 3 or German 3
10:30	Greek	Greek	Greek
1:30	Laboratory Science	Laboratory Science	Laboratory Science

Suggested Schedule for Students in the B.S. Course

Freshman

	Fall	*Winter*	*Spring*
9:30	German 1 or French 1	German 2 or French 2	German 3 or French 3
10:30	English 10	English 11	
11:30	Mathematics 7	Mathematics 8	Mathematics 9

Sophomore

8:30	German 4 or French 4	German 5 or French 5	German 6 or French 6
9:30	French 1 or German 1	French 2 or German 2	French 3 or German 3

Suggested Partial Schedule for Students in B.S. Com. Course

Freshman

	Fall	*Winter*	*Spring*
8:30	German 4 or French 4	German 5 or French 5	German 6 or French 6
9:30			Rural economics 4
10:30	English 10	English 11	History 19
11:30	Accounting 4	Commercial geography 18	Accounting 5

Sophomore

8:30	Economics 1	Economics 2	Economics 3
9:30			History 23
10:30	Accounting 6	Accounting 7	Accounting 8
11:30	History of commerce 19	History 26	

Junior

8:30	Banking 12		
9:30	Contracts (Law 4)	Negotiable paper (Law 5)	Sales (Law 6)
10:30		Transportation 17	
11:30			History 29
2:00	Money and banking 4	Public finances 5	

Senior

9:30	Accounting 10	Corporation and trust finance 13	Bank administration 14
10:30		Geology 5	History of agriculture 5
11:30		Political science 35	

MASTER OF ARTS

The degree of Master of Arts is conferred upon graduates of West Virginia University or of other institutions of equal grade upon the following conditions:

1. The candidates must pursue studies in residence at this University for at least three quarters.

2. The application of the student to become a candidate for the degree of Master of Arts must be accompanied by the proper credentials and a general outline of the course of study

3. If the application is accepted, the committee on classification and grades will appoint a sub-committee of three, consisting of the candidate's major professor and two other professors, whose duties shall be:

(a) To arrange and approve a specific course of study
(a) To act as advisers
(c) To examine and pass upon the thesis
(d) To conduct the final oral examination

4. The candidate shall present nine courses, and a thesis, or with the consent of the sub-committee two additional courses may be substituted for the thesis; at least three of the nine courses belong to his major subject. In no case shall the aggregate of major courses be fewer than twelve. The remainder of the student's work shall be in one or more allied subjects.

5. The specific course of study must be presented to the committee on classification and grades within the first four weeks after the opening of the fall term.

6. If the candidate presents a thesis it shall show marked attainment in his major subject. The thesis shall be prepared under the direction of the head of the department in which the student has his major, and shall be submitted for the approval of the committee on classification and grades at least four weeks previous to the commencement day at which the degree is expected. The thesis shall be presented in such form as the committee on classification and grades shall prescribe and approve.

7. If the thesis is approved, two typewritten or printed copies shall be deposited in the University library at least one week before the degree is to be conferred.

8. The oral examination shall cover the thesis and the major courses pursued by the candidate, or such part thereof as the sub-committee shall deem desirable.

9. The committee on classification and grades will set the time for the oral examination and shall appoint some one to represent them at the examination. The examination must be held at least three weeks before commencement day.

10. The sub-committee will report their opinion of the thesis and the result of the examination to the committee on classification and grades at least ten days before commencement day.

11. No work done before graduation will be credited toward the master's degree.

12. In case a student has failed to take the A.M. degree within two years after his course of study has been approved, his candidacy shall lapse and can be renewed only upon a new application to the committee on classification and grades.

MASTER OF SCIENCE

The degree of Master of Science is conferred upon students whose baccalaurate degree has been in science, upon the same conditions as those governing candidates for the degree of Master of Arts, stated above.

DOCTOR OF PHILOSOPHY.

The degree of Doctor of Philosophy is conferred upon Masters of Arts of West Virginia University, or holders of an equivalent degree, upon the following conditions:

1. Candidates must have spent at least two years in resident study at some university, and must be in residence at this University during the last three quarters before receiving the degree. The requirements of time, however, are wholly secondary. The degree will not be given for the completion of prescribed work, nor for study during a stated period, but only on the ground of long study and high attainments in one branch of learning.

2. The method of application, appointment of sub-committee, etc., shall be the same as for the degree of Master of Arts, described in sections 2 and 3 on page 59.

3. Candidates shall choose a major subject and cognate minor work. To the latter they shall devote not more than one-third of their time.

4. The candidate must prepare (under the direction of the head of the department in which he has his major) a dissertation which shall give evidence of his power of independent investigation, and shall be a real contribution to knowledge.

5. Not later than nine months before the date on which the candidate expects to receive the degree, he shall file with the committee on classification and grades the subject of his thesis, with the approval of his major professor, a full statement of his work in candidacy for the degree, and shall satisfy this committee of his ability to use French and German in his investigation.

6. The thesis shall be presented to the committee on classification and grades at least two months before the date on which the degree is expected. It shall be referred to a committee of three, one of whom shall be a person not connected with the University. If the thesis is approved, the candidate shall proceed to an examination, which shall be conducted by the instructors in charge of his subjects, with the aid of the same committee of three, the sub-committee and the committee on classification and grades. The date of the examination shall be determined by the committee on classification and grades.

7. If the candidate satisfactorily passes the examination he

shall before receiving the degree, deposit with the librarian of the University a typewritten or printed copy of the thesis, but if the thesis cannot be published before the conferring of the degree the candidate must either furnish the committee on classification and grades evidence of completed arrangements for publication or deposit with the treasurer of the University a sufficient sum to cover the cost of publication in approved form. When the thesis is published one hundred copies shall be presented to the University library and the deposit made with the treasurer will be returned.

SPECIAL COURSES

COMMERCE

The Course in Commerce.—The purpose of this course is to enable young men to start in business with the advantages of a trained mind and a scientific knowledge of modern business methods and conditions. A four year course is offered leading to the degree of Bachelor of Science in Commerce. In the arrangement of the curriculum of this course an effort has been made to combine general culture subjects with instruction in economic laws in their relation to the various departments of trade, in commercial and industrial organization, and in general and special accounting.

For a statement of the entrance requirements for this course see page 56. For the statement of the requirements for graduation see page 57.

The Diploma Course in Commerce.—A shorter course in commerce, covering two years, is also provided. A special diploma or certificate is awarded on the satisfactory completion of the course. Students desiring admission to the course must satisfy nine units of the entrance requirements for admission to the College of Arts and Sciences. Two units in English, one unit in mathematics, one-half unit in physical geography, one-half unit in bookkeeping, one-half unit in drawing, one unit in history, and one-half unit in civil government are prescribed.

The special diploma or certificate will be granted to any student who satisfies the above entrance requirements and satisfactorily completes twenty-two prescribed college courses as indicated below:

Department and subject.	Course Numbers	Course Credits
English:—		
Composition	10	1
Rhetoric	11	1

Commerce:—		
Special accounting	4	1
Corporation accounting	8	1
Practical banking	12	1
Economics:—		
Principles of economics	1	1
Distribution of wealth	2	1
Money and banking	4	1
Public finance	5	1
Commercial Law:—		
Law of contracts	4	1
Negotiable paper—suretyship and guaranty	5	1
Bailments and carriers	32	1
History:—		
Commercial geography	1	1
English social and industrial history	19	1
American social and economic development	28	1
Approved Electives:—		6
Total		22

Stenography and Elementary Accounting.—Instruction in elementary accounting, stenography, and typewriting is provided for students who desire it in preparation for the courses in commerce or as parallel work with these courses, in connection with the University Preparatory School at Morgantown. For detailed announcements of courses in these subjects see the Preparatory School Catalogue.

Military Science.

For detailed announcements of the course in military science see page 202.

DEPARTMENTS OF INSTRUCTION

In the following announcements unless otherwise noted, each course described is a full course, the class meeting five times a week, Mondays to Fridays inclusive through one entire quarter. Whenever possible, the quarter during which the course is given, the hour, the name of the instructor, and class room, are stated at the end of the announcement of each course. For convenience it is customary to designate the courses of study by the name of the department and the number of the particular course. Thus the course in psychology is known as "Philosophy 2"; the course in plane trigonometry is known as "Mathematics 9"; the course in electrical measurements is known as "Physics 15"; etc. The abbreviations used are: W., Woodburn Hall; S., Science Hall; M., Martin Hall; M. H., Mechanical Hall, C., Commencement Hall; A., Agricultural Experiment Station; S. F., South Fife Cottage; N. F., North Fife Cottage; G., Gymnasium; L., Library.

The departments of instruction are arranged in alphabetical order.

AGRICULTURE AND ANIMAL HUSBANDRY.

Credit will be given in the College of Arts and Sciences for five courses in Agriculture and Animal Husbandry. See page 165.

ANATOMY AND PHYSIOLOGY

Credit will be given in the College of Arts and Sciences for courses in these subjects given in the College of Medicine. See pages 197 and 199.

BOTANY AND BACTERIOLOGY

Professor SHELDON

The laboratories for botany and bacteriology are supplied with gas and electricity, hot and cold water, reagents, glassware, sterilizers, incubators, microscopes and accessories, dissecting lenses, microtomes, paraffine oven, water baths, and the simpler physiological apparatus.

Students will find it to their advantage to consult with the head of the department before registering for courses in botany and bacteriology.

Botany

1. Elementary Botany. The courses in elementary botany

are arranged for students who desire a general knowledge of the practical and economic aspects of botany.

Morphology and physiology of seed plants, their products and uses. Lectures, recitations, required readings, laboratory and field work. Fall, 10:30; N. F.

2. Elementary Botany. Continuation of course 1. Morphology and physiology of plants of common occurrence, selected from the algae, fungi, liverworts, mosses, ferns, and seed plants, with special emphasis upon those of economic importance. Lectures, recitations, required readings, and laboratory work. Winter, 10:30; N. F.

3. General Botany. An introductory study of the cell is followed by the morphology and physiology of representative species of the algae and fungi. Lectures, recitations, and laboratory work. Fall, 9:30; N. F.

4. General Botany. Continuation of course 3. Morphology and physiology of liverworts, mosses, ferns, and seed plants. Lectures, recitations, and laboratory work. Winter, 9:30; N. F.

5. Systematic Botany of Vascular Plants. Practice in description, identification, and classification. Each student will collect, determine, and hand in an herbarium of at least fifty species (none of which are to be duplicated in subsequent collections), consisting of a general collection, ferns, grasses and sedges, shrubs and trees, weeds and weed seeds, or some other special group. Lectures, laboratory, and field work.

Spring, 1:30; Fall and Winter, hours to be arranged; N. F.

Note. Courses in systematic botany of the fresh water algae, fungi, liverworts, and mosses will be arranged for students who have had suitable training for such courses

6. Plant Physiology. A fundamental course on the relation of plant structure to stimulus and function. Lectures, recitations, and laboratory work. Winter, hours to be arranged; N. F.

7. Plant Pathology. An elementary course on the nature, causes, and control of the common diseases of cultivated plants. Lectures, recitations, required readings, laboratory and field work. Spring, hours to be arranged; N. F.

8. Advanced Plant Pathology. The critical investigations of an approved problem with frequent conferences. One or more courses. Throughout the year, hours by appointment. N. F.

Bacteriology

1. General Bacteriology. This course is recommended as a preparation for other courses in bacteriology and plant pathology. It may be elected by students who desire a general knowledge of bacteriology and bacteriological technique. Methods of sterilizing and disinfection and the preparation and use of culture media are followed by a study of the morphology and life activities of selected non-pathogenic and pathogenic bacteria. Lectures, recitations, and laboratory work. Winter, 11:30; N. F.

2. Agricultural Bacteriology. Bacteria in their relation to fermentation and decay, to soils and crops, to the pollution of water supplies, to milk and its products, and to the diseases of cultivated plants and domestic animals. Lectures, recitations, and laboratory work. Spring, 8:30; N. F.

3. Medical Bacteriology. This is primarily a laboratory course, supplemented by lectures and recitations, on the preparation, sterilization, and use of culture media, followed by a study of the morphology and life activities of selected non-pathogenic and pathogenic bacteria, by means of cultures, inoculation of animals, and the examination of exudates. Fall, 8:30; N. F.

CHEMISTRY

Professor WHITEHILL and Professor KORTRIGHT

The rooms assigned to this department consist of a lecture room and four large laboratories. Connected with these are a dark room, two weighing rooms, and two preparation rooms. The laboratories afford working space for one hundred students at a time and are supplied with water, gas, chemicals, and apparatus necessary for practical work. This apparatus includes a large number of pieces used in illustrating the elementary principles of the science, as well as of the more expensive instruments used in analytical work. A collection of the latest reference and text-books is kept within easy reach of the students.

1. Inorganic Chemistry. This course is designed for beginners and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties, and compounds of the non-metallic elements, and the principles and theories of

chemical philosophy. Experimental lectures, laboratory work, and recitations.

Fall, first section, 9:30; second section, 11:30; Professor WHITEHILL, 20 S.

2. Inorganic Chemistry. This course includes the study of the metallic elements, and special attention is paid to the application of chemistry to agriculture, engineering, medicine, and every-day life.

Winter, first section, 9:30; second section, 11:30; Professor WHITEHILL, 20 S.

3. Organic Chemistry. This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work, and recitations.

Spring, first section, 9:30; second section, 11:30; Professor WHITEHILL, 20 S.

On Mondays at 1:30, during the Winter and Spring quarters, a special laboratory course is given to accompany courses 1, 2, and 3, which is prescribed for all students who are taking the courses named. Students who have completed these courses elsewhere, and have received credit for the same, may be admitted to this laboratory course and will receive credit for the work done. This work is conducted jointly in the laboratories of the department by Professors Whitehill and Kortright, with the assistance of students who have taken advanced work in chemistry.

4. Qualitative Analysis. This is a laboratory course, treating of the separation and detection of the common elements. Students taking this course are under the constant and direct supervision of the instructor, and they are expected to be able at any time to answer questions concerning the theory and practice of their work. One-third course.

Fall, Tuesday and Thursday or Wednesday and Friday, 1:30; Professor KORTRIGHT.

5. Qualitative Analysis. Continuation of course 4. One-third course.

Winter, Tuesday and Thursday or Wednesday and Friday, 1:30; Professor KORTRIGHT, 22 S.

6. Elementary Quantitative Analysis. This course includes a small number of simple gravimetric, volumetric, and electrolytic determinations, together with the study of the operations involved. One-third course.

Spring, Tuesday and Thursday or Wednesday and Friday, 1:30; Professor KORTRIGHT.

7. Analysis of Coal, Coke, and Water. This is a course designed especially for engineering students, but open to all others who have the necessary preliminary training. One-third course.

Spring, Tuesday and Thursday or Wednesday and Friday, 1:30; Professor KORTRIGHT. 22 S.

8. Toxicology. Designed especially for medical students. The course includes a study of inorganic and organic poisons, and their physiological effects, and their antidotes. One-third course.

Spring, Tuesday and Thursday, 1:30; Professor KORTRIGHT, 22 S.

9. Quantitative Analysis. .The work of this course includes a study of the theory and practice of the quantitative separation and determination of the different elements; the analysis of minerals and technical products; the proximate and ultimate analysis of organic compounds; the investigation of foods; sanitary water analysis; gas analysis.

Fall, Winter, Spring, 1:30; Professor KORTRIGHT, 22 S.

10. Quantitative Analysis. This course includes practice in the analysis of iron and steel, iron ores, limestone, dolomite, sand, clay, and other materials usually brought to the laboratory of an iron and steel works. The special methods employed are those used in the laboratories of the iron and steel works located in the Pittsburg district. One-half course.

Fall, Winter, Spring, Tuesdays and Thursdays, 1:30; Professor WHITEHILL, 21 S.

11. Medical Organic Chemistry. A lecture and laboratory course in special subjects of organic chemistry; as carbohydrates, fats, proteids, and foods in general. Pre-requisites; courses 1, 2, and 3.

Fall, 10:30 to 12:30; Professor KORTRIGHT, 22 S.

12. Medical Organic Chemistry. Continuation of course 11.

Winter, 10:30 to 12:30; Professor KORTRIGHT, 22 S.

13. Medical Analysis. The study and practice of the analytical methods used in modern medicine.

Spring, 10:30 to 12:30; Professor KORTRIGHT, 22 S.

14. **Organic Chemistry.** .This course and the following courses are intended for students who specialize in chemistry. They consist

of two lectures, or recitations, and at least six laboratory hours each week. Fall, 9:30; Professor KORTRIGHT, 22 S.

15. Organic Chemistry. Continuation of course 14.
Winter, 9:30; Professor KORTRIGHT, 22 S.

16. Organic Chemistry. Continuation of course 15.
Spring, 9:30; Professor KORTRIGHT, 22 S.

17. Chemical Preparations. This course is designed to meet the requirements of students who wish to specialize in chemistry, or who wish to become teachers of the science. Exercises in the construction and fitting up of apparatus will be given, and chemical manipulation will receive special attention. Quantitative work in the verification of chemical laws will be undertaken, and the course will be made as fully illustrative of laboratory processes as possible. One-half course.

Fall, Tuesday and Thursday, 1:30; Professor WHITEHILL, 21 S.

18. Chemical Preparations. This course is a continuation of course 17. It will include the preparation and properties of some typical organic compounds, and the work will be mostly quantitative in character. One-half course.

Winter, Tuesday and Thursday, 1:30; Professor WHITEHILL, 21 S.

19. Chemical Calculations. This course is designed for students who wish to study the mathematical principles which are involved in chemical operations. It includes the consideration of questions involving weight and volume reactions, atomic and molecular weight determinations, the methods of calculating the results of analyses, and the various other computations of importance to the student of chemistry. One-half course.

Spring, Tuesdays and Thursdays, 1:30; Professor WHITEHILL, 21 S.

20. Special Work. Chemistry offers a wide field for investigation. Special work in any of the various departments of the science may be taken in the laboratory under the direction of the instructors, and credit will be given in proportion to the amount of work accomplished.

For courses in agricultural chemistry, see announcements of the College of Agriculture, page 168.

CIVIL ENGINEERING.

Credit will be given in the College of Arts and Sciences for certain courses in this subject given in the College of Engineering. See page 138.

COMMERCE

Mr. WILLIS and Mr. KING

Only the courses marked by an asterisk can be offered as electives by candidates for the B.A. or B.S. degrees.

4. Special Accounting. A theoretical course in keeping the accounts in special lines of business. The object of this course is to familiarize the student with nomenclatures of the various lines of business, and to furnish him with a practical working knowledge of the special accounts necessary to handle the specific lines of trade. Department store accounts is a feature of this course. The work outlined in the text-books has been taken from actual accounts kept in the different kinds of business mentioned. Prerequisites, Accounting 1 and 2. Fall, 11:30; Mr. WILLIS; 12 M.

5. Special Cost Accounting. Accounting necessary to obtain at any time the exact cost of articles produced by the manufacturer, the origin and cost of raw material; record of stock on hand, and consumption in process of manufacture; comprising purchase record and invoice system, freight distribution, stock and store room systems and records, the various methods by which material is transferred from stock to the process of manufacturing, perpetual inventories, requisitions, etc.; labor in relation to cost, pay bills; distribution sheets and safeguards in connection with payment. Manufacturing expenses, costs of factories, etc.

Spring, 11:30; Mr. WILLIS; 12 M.

6. Railroad Accounting—Station Work. The course covers the entire work done in a railroad freight station from the loading of cars to the minutest detail in the office work. The student learns station work as it is carried on today by the use of a complete set of vouchers like those used by the Baltimore and Ohio and Pennsylvania railroads. The technical work embraces the classifying of freights, rating, auditing, checking, adjusting discrepancies, excess tonnage, demurrage, routing, apportioning rates, etc. Text, Graden System Railroad Technical Training. Prerequisite, Accounting 1.

Fall, Winter, Spring, 10:30; Mr. WILLIS; 12 M.

7. Railroad Accounting—General. An examination of the system of accounting necessary to meet the demands of the complicated railroad methods of modern times, embracing organization, capitalization, speculation, rate-making, competition, pooling, consolidating and general stock manipulation, etc. Prerequisites, Accounting 4 and 6.

Fall, 10:30, Mr. WILLIS; 12 M.

8. Corporation Accounting. A course presenting the accounting necessary in the formation of a corporation and its operation. The records of the secretary of the corporation and the accounts growing out of the minutes, etc.; the accounts affected by the issuing of installment certificates of stock, by their transfer, by their surrender, by the issuing of stocks, and of additional stocks, by dividends, by changes from partnerships into corporations, etc.; methods of preparing financial statements for publication. Prerequisite, Accounting 3.

Winter, 10:30, Mr. WILLIS; 12 M.

***9. Acounting Procedure.** Installation of accounting systems; theory of accounts and its adaptability to practical work; books of original entry, their connection with the general scheme of business; analysis of accounts of trades, corporations, and executors, etc.; depreciation of current assets and liabilities, fixed and working capital, expert methods of opening and closing accounts in various lines of trade; realization and liquidation of accounts, statements of affairs of insolvent debtors; statements prepared for establishing a commercial rating and credit; a consideration of personal and impersonal accounts; the best methods of combining for quick and accurate consideration of the condition of the business, etc. Spring, 10:30; Mr. WILLIS; 12 M.

***10. Auditing.** The course is based on an assumed knowledge of accounts both as an art and as a science. The student passes naturally from a study of practical accounts and the theory of accounts to that of professional examinations and oversight. The study is conducted from the standpoint of traveling or assistant auditor, or that of the expert accountant. Special attention is given to reports of auditors and finance committees of states, corporations, and municipalities, etc.

Fall, 9:30; Mr. WILLIS; 12 M.

11. Executors and Trustees. This course exhibits the best methods for financial reports of executors and trustees, and the le-

gal rights and duties of trustees and executors so far as they relate to accounting.

Spring, 11:30; Mr. WILLIS; 12 M.

***12. Practical Banking.** The object of this course is to give the student a comprehensive knowledge of the inside workings of a bank, and of the laws regulating national and state banks. The subjects treated are deposits, duties of depositors; reserves, loans and discounts; circulating notes, credit and commercial paper; accommodation paper; checks and bills of exchange; branch banking; the duties of officers and clerks; the liabilities of directors and stockholders; and bank management in general. An effort will be made to have some special lectures by experienced bankers in connection with this course.

Fall, 8:30; Mr. WILLIS; 12 M.

13. Corporation and Trust Finance. An exposition of the financial organization and conduct of large corporations; the accounting necessary in railroad and industrial combinations and mergers; a review of the laws and the customs that govern the financial management of foreign corporations.

Winter, 9:30, Mr. WILLIS; 12 M.

14. Bank and Trust Company Administration. This course furnishes a complete exposition of all the methods of accounting which relate principally to banks and modern trust companies. In connection with the lectures in this course, blanks and forms collected from the best regulated banks and trust companies in the country are examined by students. Prerequisite, Accounting 3.

Spring, 9:30, Mr. WILLIS; 12 M.

15. Insurance. A treatment of the law governing insurance in general. Form and nature of the contract; effects of way; consummation of contract; termination and revival; subject matter; insurable interest, agents, powers and duties; warranties, application, construction, representations, concealments; special provision for special vocations; alienations; title, health, habits, age, etc. Premiums; over-valuation; assignment of policy; beneficiaries; duration, and risk; of loss and its adjustment; subrogation; creditors; of notice, preliminary proof; of accident insurance; of guarantees and other kindred insurances; mutual insurance; remedies, etc.

Winter, Hour to be arranged; Mr. WILLIS, 12 M

16. Secretarial Work. A series of studies designed to prepare students for secretarial positions, particularly in corporation

work. The student is given stenographic exercises and special attention is devoted to corporation practice and business methods.

Spring, 8:30; Mr. KING; 18 M

*17. **Transportation.** A history of the various systems of transportation in the United States and the methods used in carrying on commerce between this and other countries, and a study of express companies, the United States postal service, and the telegraph and telephone systems and their influences on commerce.

Winter, 10:30; Mr. KING; 18 M

*18. **Commercial Geography.** A description of the surface of the earth, with special reference to the production, manufacture, transportation and exchange of articles of trade. A general outline of the countries of the world; soil, climate, agricultural products, forests, manufactories, quarries, mines, centers of industry, foreign relations, ways of communication, social relations and conditions, imports, exports and markets. Special attention is given to the study of the United States. Text-book, Adams' "Commercial Geography." Full course. Winter, 11:30; Mr. WILLIS 12 M

*19. **History of Commerce.** History of commerce; methods of exchange in ancient times; shipping of the ancients; fairs and markets; results of maritime discoveries; changing the commercial routes; international treaties affecting commerce; scientific and industrial discoveries affecting commerce; trade restrictions; consuls and modern commerce; boards of trade; stock and produce exchanges; modern modes of preparing and shipping articles of merchandise; circulation of commodities between cities and countries; trade statistics; dependence of manufactures upon producers of raw material; nomenclature of commerce. Text-book, Webster's "History of Commerce." Fall, 11:30; Mr. KING; 18 M

20. **Consular Service.** A brief history of the consular service, the methods of selecting consuls and the organization of American consul service, followed by a technical study of the training and the duties in regard to appointments, etc.

Omitted in 1910-11.

21. **Consular Service.** The study of the trade route of the different markets, particularly new markets; of the means used for securing markets; of the publication and the distribution of information secured concerning trade conditions in different parts of the world. The instruction is by lectures and the use of consular reports, etc. Omitted in 1910-11.

ECONOMICS AND SOCIOLOGY

Professor REYNOLDS

It is the aim of this department, as at present constituted, to give elementary and practical instruction in economics and sociology, such as will meet the requirements of a good college course and serve as an introduction to special and advanced studies in these branches. Instruction is given by means of text-book lessons, lectures, recitations, reviews, exercises and references to standard works.

Economics

1. **Principles of Economics.** An introduction to the study of the general subject of political economy. Special attention is given to the exposition of fundamental laws as operating in the production, distribution, exchange and consumption of wealth.
Fall, 8:30; 14 S.

2. **Distribution of Wealth.** The features and tendencies of modern industrial organization; rent, interest, wages, profits, profit-sharing, cooperation, socialism; capitalistic and labor combinations; monopolies; state regulation of corporations and industrial organizations. Winter, 8:30; 14 S.

3. **Labor Problems.** This history and status of labor; labor organizations, their origin, development, objects, methods, achievements and prospects; industrial, social and political power and influence of labor unions; arbitration and conciliation.
Spring, 8:30; 14 S.

4. **Money and Banking.** A discussion of the nature and functions of money; an examination of the monetary system of the United States with a comparison of the monetary systems of the leading nations of the world; a sketch of monetary theories and proposed reforms; nature and functions of banks, and some requisites for an adequate national currency. Fall, 9:30; 14 S.

5. **Public Finance.** A study of public expenditures, sources of revenue, principles and methods of taxation, financial policies, public debts and public credit. Winter, 9:30; 14 S.

6. **Public Economics.** An examination into the relation, interests, rights and powers of the state in regard to economic enterprises; the practicability and expediency of public ownership and

control of such enterprises, with a study of the history and results of such control so far as it has been undertaken.

Spring, 9:30; 14 S.

7. **History of Economics.** An outline of the history of economic conceptions and theories from the earliest times to the present; a sketch of the economic literature of Europe and the United States; economic conditions and the rise of industries; modern industrialism, its rise, characteristics and tendencies. (Omitted in 1911.) Spring, 9:30; 14 S.

Sociology

1. **Historical Sociology.** An outline of theories of the origin and development of the human species; of the origin, location and characteristics of the different races of men; of the rise and growth of institutions and arts such an language, government, religion, and the various forms of industry and other leading social activities. Fall, 10:30; 14 S.

2. **Analytical Sociology.** An examination of the structure and functions of contemporary society—social elements, social forces, social organs, social activities, social conditions and social products. Winter, 10:30; 14 S.

3. **Practical Sociology.** An outline of the history and work of organizations for social betterment and reform; of contemporary charities, their methods and results, and of the treatment of the dependent, defective and delinquent classes.

Spring, 10:30; 14 S.

DOMESTIC SCIENCE

Credit will be given in the College of Arts and Sciences for three courses in this subject given in the College of Agriculture. See page 170.

EDUCATION

Professor DEAHL

The courses offered in this department aim to contribute to the educational influences and to the professional efficiency of the schools of the state in the following ways: 1. To interest those students who may without intending to use the knowledge in teaching desire to study the science of education as a part of their general culture course. 2. To afford university students who wish to teach for a time after graduation the means of professional

training commensurate with their academic training. 3. To furnish appropriate professional education to University students, and to any experienced teachers of suitable age and the attainments, who may desire to fit themselves for teachers, principals, or superintendents of schools.

Students who elect education as their major may combine with it a limited amount of work in psychology, sociology or philosophy. The required minors may be in any department of the University, but students are urged to do sufficient work in some one department to prepare them to teach a particular subject, as English, Physics, Mathematics, etc.

1. **History of Education, Ancient and Mediaeval.** A study in the evolution of ideas and of education ideals; education as a social factor in the development of civilization. A brief study of some one Oriental system such as the Chinese, Hebrew, or Egyptian education; the forces and ideas and ideals that fashioned ancient education—social bonds, individualism, reason, moral freedom etc.; the development of the Christian schools, moslem education, the seven liberal arts, monasticism, scholasticism, rise of universities, the renaissance and reformation, teaching organizations. Fall, 9:30; 24 W.

2. **History of Education, Modern.** A study in the development of education since the reformation. The development of modern educational theory—(a) the humanistic, (b) the realistic, (c) the scientific; physiological, psychological, and sociological ideas of education; the development of modern national, state, and city systems and of modern programs of studies and of method. Winter, 9:30; 24 W.

3. **Modern Educational Theory.** The purpose of this course is to trace the development of modern educational thought to the present time. A summary of the theory and practice of mediaeval education will be followed by a study of the educational doctrines as found in the lives and writings of Pestalozzi, Herbart, Froebel, and other reformers. Spring, 9:30; 24 W.

4. **Philosophy of Education.** This course aims to lay the basis of a scientific theory of education. The process of education is explained from the standpoint of the doctrine of evolution; the principles thus arrived at are applied from the standpoint of the history of civilization, the developing powers of the child, and the cultivation of individual and social efficiency. Fall, 11:30; 24 W.

5. **Philosophy of Education.** A continuation of course 4. Winter, 11:30; 24 W.

6. School Administration and Supervision. This course is intended primarily for principals and superintendents of schools, and for those who are preparing for such school work. The course deals with such topics as: school boards, school buildings and grounds, school equipment, the preparation of principals and superintendents, the preparation of teachers, the selection and promotion of teachers, city and rural supervision, examinations and tests, grading and promoting pupils, etc. Omitted in 1910-11. Spring, 10:30; 24 W.

7. School Administration and Supervision. This course is a continuation of course six and makes a study of the following topics: business and educational administration of schools, the school system and the school, the functions of the superintendent and of the principal, the improvement of teachers and teaching, the teachers' meeting, institutes and associations, lesson plans, progress books and reports, the program of studies in elementary and in secondary schools, school government and pupil government, the selection of books and the use of libraries, estimating teaching and the standard of school work, etc. Spring, 10:30; 24 W.

8. Foreign School Systems. The purpose of this course is to make a comparative study of the school systems of France and Germany, together with special features of other continental systems. The practical problems will be examined from the standpoint of American education. Winter, 10:30; 24 W.

9. School Systems, British and American. This course deals with the development and present status of education in England, Scotland, Canada, and the United States. The practical workings of the systems will be emphasized. Omitted in 1910-11.
Winter, 10:30; 24 W.

10. The Art of Studying and Thinking and Teaching. The aim of this course is to point out how to study, how to direct the work of pupils, how to train pupils to think; to find a scientific method of the recitation and to determine the essential elements of teaching. Students will formulate and discuss lesson plans, observe, so far as conditions will permit, lessons given by regular teachers ,and report the same in class. Prerequisites, Philosophy 2 or Education 12, and Education 4 and 5. Spring, 11:30; 24 W.

11. Criticism and Supervision of Instruction. This course is planned for teachers, supervisors, principals, and superintendents of schools. It will make an intensive study and application of some fundamental principles of education in both method and program of

studies. Lessons will be planned and then taught with a class of pupils in the public schools of Morgantown. The lessons thus taught will be discussed in conference. The course will afford an opportunity for observation of lessons, practice teaching, and the supervision of instruction. Prerequisite, Education 10.

Fall and Winter, hour to be arranged; 24 W.

12. Applications of Psychology in Learning and Teaching. This course will present the principles that control rational learning and successful teaching as far as such principles may be derived from psychological laws. A number of psychological topics—the senses, sensation, perception, memory, imagination, reason, association of ideas, apperception, interest and attention, mental development, will, habit, and character—will be studied.

Spring, 8:30; 24 W.

13. Seminar. The curriculum of the elementary school.

Fall or winter, 2:00; 24 W.

14. Seminar. High schools and secondary education.

Fall or winter, 2:00; 24. W.

15. Seminar. The rural school—its function, curriculum; state, county, and district supervision. Spring, 2:00; 24 W.

NOTE—Education 13 and 14 will not both be given in any one term.

ENGLISH

Professor ARMSTRONG, Professor PATTERSON, Professor COX, Associate Professor BARBE, Associate Professor NEIL, and Assistant Professor SMITH.

There are three sections in this department: (1) Rhetoric, (2) English Language and Literature, (3) Elocution.

Rhetoric

10. Composition. Daily themes and fortnightly long papers, study of prose masterpieces, conference, recitations, class criticisms of written exercises, lectures. Required of all candidates for the baccalaureate degree in arts and sciences.

Fall, 10:30; Spring, 11:30; Professor PATTERSON, 16 W.
Fall, 11:30; Winter, 9:30; Professor SMITH, 13 W.

11. Rhetoric. Two or three themes a week, study of prose masterpieces, four long papers, conferences and class criticisms,

lectures. Required of all candidates for the baccalaureate degree in arts and sciences.
Fall, 11:30; Winter, 10:30; Spring, 9:30; Professor PATTERSON, 16 W.

12. Argumentation. Study of specimens, practice, lectures. Required of all students who make English their major.
Spring, 10:30; Professor PATTERSON, 16 W.

14. Description and Narration. Study of specimens, practice, lectures. Winter, 11:30; Professor SMITH, 13 W.

15. Themes. An advanced course. Daily themes are required; the class will meet the instructor twice a week in periods of one and one-half hours' length each, for criticisms and lectures; weekly conferences.
Fall and Winter, hour to be arranged; Professor PATTERSON, 16 W.
Spring, hour to be arranged; Professor SMITH, 13 W.

16. The Essay. The essayists of the nineteenth century are studied as illustrating the uses of the essay form and its growth in our literature; writing of typical essays.
Fall, 9:30; Professor PATTERSON, 16 W.

18. The Poem. The history of versification, lectures, investigation of assigned topics, composition, and criticism.
Winter, 9:30; Professor PATTERSON, 16 W.

20. The Letter. Some great writers seen in their letters and a study of their use of this form of composition; practice in writing.
Fall, 9:30; Professor SMITH, 13 W.

21. The Thesis. This course aims to show the student how to gather material and write a thesis. Lectures, reports and conferences. Spring, 9:30; Professor SMITH, 13 W.

English Language and Literature.

The aims of this division of English are: (a) a scientific knowledge of the origin and development of the English language; (b) a general acquaintance with English literature; (c) a specific knowledge of certain great authors, periods, and movements in English literature.

30. Old English. Bright's Anglo-Saxon Reader; the essentials of Anglo-Saxon grammar; translations. Required of all students who make English their major. Not elective for freshmen.
Fall, 8:30; Professor Cox, 23 W.

31. Old English. Beowulf. Translation, with due attention to text, metre, literary history, etc. Prerequisite, English 30.
Winter, 8:30; Professor Cox, 23 W.

32. Early Middle English. Changes in the language. Critical reading of early middle English texts. Prerequisite, English 30.
Spring, 8:30; Professor Cox, 23 W.

36. General Survey of English Literature. An introduction to the study of literature. This course includes a historical view of the whole field of English literature and a close, critical study of a few classics from each of the great periods of literary development. Required of all students who make English their major.
Spring, 8:30; Professor ARMSTRONG, L.

37. Chaucer. The Canterbury Tales. During the first part of the term the work will be chiefly linguistic, with interpretation of passages. The latter part of the term will be devoted to a somewhat rapid reading, with such consideration of form, sources, etc., as are necessary to a clear understanding of what is read. Required of all students who make English their major.
Winter, 9:30; Professor Cox, 23 W.

39. Shakespeare. The aim of this course is to develop the power to read Shakespeare with intelligent appreciation. Three plays will be studied carefully, with special attention to exact interpretation and to those peculiarities of language in which Shakespearean usage differs from our own. Required of all students who make English their major. Fall, 10:30; Professor Cox, 23 W.

40. Shakespeare. This course is a continuation of course 39, with more attention to literary interpretation. Required of all students who make English their major.
Winter, 10:30; Professor ARMSTRONG, L.

41. Shakespeare. A literary course, intended for purposes of general culture. A number of the plays will be read, with attention to characters, plot development, etc.
Spring, 10:30; Professor ARMSTRONG, L.

42. Milton. This course will consider Milton's poems and the Areopagitica. Interpretation of passages; consideration of forms, sources, style, etc.; lectures. Omitted in 1910-11.
Winter, 11:30; Professor Cox, 23 W.

43. The Elizabethan Period. From Tottel's Miscellany to the

death of Spenser (1557-1599). The authors studied are Wyatt, Surrey, Roger Ascham, Lyly, Sidney, and Spenser. Special attention will be given to Spenser. Winter, 11:30; Professor Cox, 23 W.

45. English Literature of the Queen Anne Period. The course will deal with those writers who are especially representative of the classical spirit in English literature. The authors studied are Dryden, Swift, Addison, Steele, DeFoe, Pope, and Gay. Omitted in 1910-11. Spring, 11:30; Professor Cox, 23 W.

46. English Literature. From the death of Swift to the publication of the Lyrical Ballads (1745-1798). The authors studied are Gray, Collins, Johnson, Goldsmith, Cowper, Sheridan, Burke, Burns, and Blake; some attention to lesser authors.
Winter, 9:30; Professor ARMSTRONG, L.

47. English Literature. From the publication of the Lyrical Ballads to the death of Scott (1798-1832). The chief authors studied are Wordsworth, Byron, Shelley, Keats, and Scott.
Spring, 9:30; Professor AMSTRONG, L.

48. English Literature. From the death of Scott to the death of Tennyson (1832-1892)—the poets. The chief authors studied are Tennyson, Browning, Arnold, Swinburne, Rossetti, and Morris.
Winter, 9:30; Professor BARBE, L.

49. English Literature. Prose writers since 1832. The chief authors studied are Carlyle, Ruskin, Dickens, Thackeray, Eliot, and Stevenson. Fall, 9.30; Professor ARMSTRONG, L.

50. The English Old Testament. A study of the Old Testament in English as literature; discussion of its literary forms and interpretation of some of its masterpieces.
Fall, 10:30; Professor ARMSTRONG, L.

51. **The Short Story.** The short story as a form of literature. A study of its development and some of its types from Poe to Kipling. Winter, 9:30; Professor ARMSTRONG, L.

52. American Literature. A brief outline of its historical development and a study of selected works of representative authors.
Fall, 8:30; Professor ARMSTRONG, L.

53. The Novel. The study in this course will include the historical development of the novel; its significance; relation to modern life; types; tendencies, reading of novels; reports; lectures.
Spring, 11:30; Professor Cox, 23 W.

55. English Literature. Study of an Author. The entire production, or the most important work, of some selected author will be studied to gain a complete view. The author to be studied in 1910 is Nathaniel Hawthorne.

Winter, 8:30; Professor ARMSTRONG, L.

57. Seminar in English Literature. English and Scottish popular ballads. This course will consider the beginnings and development of popular poetry; a wide reading of English and Scottish ballads; interpretation and criticism; reports, by students, on assigned topics; lectures twice a week.

Fall, hours to be arranged; Professor Cox, 23 W.

58. Literature in the Grades and the High School. This course deals with the principles of literary criticism; application of tests; the science and art of story-telling; general and special methods of presentation; the tributaries of the literary stream; course of study; bibliography.

Spring, 9:30; Professor Cox, 23 W.

59. The English New Testament. A study of the New Testament in English as literature. All the books will be read and studied with attention to literary form and interpretation. Omitted in 1910-11. Spring, 9:30; Professor ARMSTRONG, L.

60. A Study of Poetry. The essential qualities of poetry, together with the study of a considerable number of great short poems in English and American literature. These poems will be studied with a view to their literary appreciation; the content and meaning, rather than the form, will be given most attention.

Winter, 10:30; Professor BARBE.

NOTE—The instructors in the English language hold themselves ready to assist and advise competent students who may propose plans of special study that meet the approval of the department.

Elocution

NOTE:—The necessity of English literature in connection with the work in elocution cannot be too often impressed. No student will be recommended as a teacher of elocution, or as a public reader, unless he has had in addition to his courses in elocution, at least six courses in English Literature.

Requirements for Certificates. Students applying for a certificate in elocution must have reached full senior standing in the College of Arts and Sciences of this University, or in some school of

equal grade; all class courses in elocution shall have been completed and such private lessons taken as the individual need of the student may have required.

Any five courses from the following list may be offered as electives for the bachelor's degree in the College of Arts and Sciences:

1. **Principles of Elocution.** A study of vocal organs and muscles; methods of breathing; vocal culture for purity, strength, compass, flexibility, and sustaining power; study and application of vocal elements,—form, degree, stress, quality; first principles of action.
Fall, 2:00; Winter, 2:00; Professor NEIL, 14 M.

2. **Principles of Elocution.** Vocal culture continued; study and drill in the vocal elements; pitch, degree, change, melody, time, quantity, pause, movement; completion of principles of action; analysis, preparation, and rendition of selections; criticism of application of elements. Spring, 2:00; Winter, 3:30; Professor NEIL, 14 M.

3. **Literary Analysis and Rendition.** Development of individuality in voice and action; lectures on analysis, mind concentration, memory, scene building, and interpretation; individual study of selections from every style; rendition of prescribed selections and criticism by members of class and instructor.
Spring, 3:30; Professor NEIL, 14 M.

4. **History of Oratory.** A philosophical survey of the origin and the history of the oration; a study of the leading orators of the various periods; analysis by each student of the noted speeches of different times and countries; class reviews of the style, diction, depth, clearness,, climax, and persuasive power of the orators studied.
Fall, 3:30; Professor NEIL, 14 M.

5. **Original Orations.** Lectures on styles of address, kinds of discourse, construction of speeches, ancient, mediaeval, and modern oratory, and the sources of eloquence; preparation and delivery of topical speeches and original orations.
Winter, 9:30; Professor NEIL, 14 M.

6. **Argumentation and Debate.** Lectures on extempore speaking, principles of debate, preparation of briefs, arrangement of argument, team work, and rebuttal; extempore speeches and debates required of every student. Fall, 10:30; Professor NEIL, 14 M.

7. **Advanced Argumentation and Debate.** Continuation of course 6. The object of this course is to give the student a mastery over the perplexing technicalities of argumentative laws, to develop

a clear, direct, forceful, and persuasive style of speaking, and to perfect the art of team debating.

Winter, 10:30; Professor NEIL, 14 M.

8. **Vocal Interpretation of Shakespeare.** Lectures on the psychological setting of characters, plot, and purpose of one of Shakespeare's plays; study, interpretation, and memoriter rendition of the same play. Spring, 8:30; Professor NEIL, 14 M.

9. **Vocal Interpretation of the Bible.** The object of this course is to teach the student the literary worth of the Bible, its narrative, didactic, allegorical, dramatic, oratorical, lyric, and epic spirit. This is accomplished through the vocal rendition of Biblical selections.

Spring, 9:30; Professor NEIL, 14 M.

10. **University Debate.** This course is required of all students who have been chosen to represent the University in the intercollegiate contests in debate. It gives a thorough training in forensic oratory. Winter, hour to be arranged; Professor NEIL, 14 M.

NOTE:—All classes meet three times a week—on Mondays, Wednesdays, and Fridays. In courses 1, 2, 3, and 4, the class period is one and one-half hours. In the other courses the class period is one hour. Sufficient work is required in each course for a full course credit.

Private Lessons

In addition to the class work in elocution, a thorough and comprehensive course of individual instruction is offered. Each lesson occupies a full one-hour period, and is devoted to a single indivdual. This branch of the work is indispensable to all who wish to follow any line of public speaking. The instruction may be taken either as single lessons or in course of one college term each.

Tuition for Private Lessons

Single Lesson	$ 2.50
Per college term, 1 a week	20.00
Per college term, 2 a week	35.00

All class work in Elocution and Oratory is free to students enrolled in the University.

ENTOMOLOGY

Credit will be given in the College of Arts and Sciences for

three courses in Entomology given in the College of Agriculture. See page 169.

FINE ARTS.

Associate Professor LEONARD

Credit will be given in the College of Arts and Sciences for not more than five courses in fine arts. In case credit is asked for the maximum number of courses, these must include the courses in the history of art.

1. **Elementary Drawing.** The historic forms of art and their development. Lectures, with collateral reading and practice in drawing. Fall, 9:30; L.

2. **Elementary Drawing.** A continuation of course 1. Winter, 9:30; L.

3. **Elementary Drawing.** A continuation of course 2. Spring, 9:30; L.

4 **Advanced Drawing.** Historic periods of architecture, sculpture, and painting. Lectures, with collateral reading and practice in drawing. Fall, 10:30; L.

5. **Advanced Drawing.** A continuation of course 4. Winter, 10:30; L.

6. **Advanced Drawing.** A continuation of course 5. Spring, 10:30; L.

7. **The History of Greek Art,** with a consideration of the arts of Egypt, Assyria, and Phoenicia, in their relation to Greek art. Fall, 8:30; L.

8. **The History of Mediaeval and Modern Art,** with special consideration of the Renaissance period. Winter, 8:30; L.

Courses 7 and 8 are not elective for freshmen.

FORESTRY

Credit will be given in the College of Arts and Sciences for two courses in Forestry given in the College of Agriculture. See page 172.

GEOLOGY AND MINERALOGY

Professor BROWN

The equipment for purposes of illustrative teaching in this subject consists of many thousands of fossils, casts, and models, a good collection of minerals, specimens of all the important building stones, and Ward's College Collection in Paleontology, showing the advancement from the early forms of life to those of the present time. The University is situated in the midst of a great coal-producing region, within five miles of the western fold of the Appalachian mountains, and oil and gas wells are but a short distance away. The natural facilities for the study of geology are unsurpassed.

2. **General Geology.** A general course in dynamic and structural geology; economic applications of geology will receive special attention; numerous excursions will be made; recitations, lectures, and field work. Prerequisites, Chemistry 1, 2, Physics 2.

Fall, 11:30; Spring, 10:30; 30 S.

3. **Paleontology.** The progress and development of plants and animals through the different ages of the earth; recitations and lectures. For illustration in this subject the University has an equipment of many thousands of fossils, casts and models. Prerequisites, Zoology 1 and Botany 2.

Winter, 8:30; 30 S.

4. **Economic Geology.** Common rock and vein-forming minerals; physical geography and geology of the United States; the origin of ore deposits; mining terms and methods; metalliferous deposits. Recitation and lectures. Ries' Elements of Economic Geology. Prerequisites, Geology 3.

Fall, 10:30; Spring, 11:30; 30 S.

5. **Economic Geology.** The fuels—coal, oil, and natural gas—soils, clays, fertilizers, precious stones, and building stones. Recitations and lectures. Ries's Elements and Merrill's Stones for Building and Decoration. Winter, 10:30; 30 S.

6. **Mineralogy.** Crystallography; physical qualities of minerals; description of minerals consisting of basic elements to the silicates; recitations, lectures, and practical determinations. The University has a good collection of minerals for practical instruction. Moses's Elements of Mineralogy.

Fall, 8:30; Spring, 9:30; 30 S.

7. Mineralogy. The silicates and hydrocarbon compounds and their determination. Moses's Elements of Mineralogy.
Winter, 11:30; 30 S.

GERMANIC LANGUAGES AND LITERATURE

Professor TRUSCOTT and Mr. GRAVES

NOTE:—The text-books named in the following courses may be changed at any time, but the grade and character of the work outlined in each will remain the same.

Students taking German as a major will be expected to take as collateral work three courses in Anglo-Saxon and three courses in the history of Germany.

1. Elementary German. The object of the course is to acquaint the student with the elements of the grammar, to give him a reading knowledge of the easiest German prose, and as much practice as possible in pronunciation. Vos' or Thomas' Grammar; Super's German Reader, Part I, or Tuckerman's German Reader.

Fall, first section, 9:30; Mr. GRAVES; second section, 10:30; Mr. GRAVES. Winter, 11:30; Professor TRUSCOTT, 18 W.

2. Elementary German. A continuation of course 1; reading of easy prose and poetry; several poems will be memorized. Elementary work in composition Super's Reader; Lechner's Legends of German Heroes; Geibler's Deutsche Sagen; Bierwirth's German Exercises.

Winter, first section, 9:30; Mr. GRAVES; second section, 10:30; Mr. GRAVES. Spring, 11:30; Professor TRUSCOTT, 18 W.

3. Elementary German. A continuation of course 2; reading, dictation, elementary work in composition, accompanied by a review of the main points of the grammar; Immensee; Hoeher als die Kirche; L'Arrabiata; Bierwirth's German Exercises.

Fall, 11:30; Professor TRUSCOTT; spring, first section, 9:30; second section, 10:30; Mr. GRAVES, 19 W.

4. German Prose. Rapid reading of prose by modern authors to familiarize the student with the more general phases of the language. Fall, 8:30; Mr. GRAVES, 19 W.

5. Composition. Translation of English prose into German;

discussion of grammatical points in connection with the translation; dictation; study of the irregular verbs. Pope's Prose Composition; Thomas' Grammar, Part II. Winter, 8:30; Mr. GRAVES, 19 W.

6. German Poetry. Translation of one long poem and one drama; reading of many and memorizing of several well-known poems; Hermann and Dorothea; Die Jungfrau von Orleans; Klenze's Deutsche Gedichte. Spring, 8:30; Mr. GRAVES, 19 W.

7. Advanced Prose. Reading of descriptive and narrative prose . Selections from the works of Ludwig, Storm, Keller, Meyer, and Sudermann. Fall, 8:30; Professor TRUSCOTT, 18 W.

8. **Advanced Composition.** Dictation, oral practice based on Bronson's Colloquial German; Jagemann's Prose Composition. Winter, 8:30; Professor TRUSCOTT, 18 W.

9. Heine. Study of his life; reading from his prose and poetry; Reisbilder; Die romantische Schule; Das Buch der Lieder. Spring, 8:30; Professor TRUSCOTT, 18 W.

10. Lessing. Biography by Rolleston. The following plays will be read: Miss Sara Sampson, Minna von Barnhelm, Emilia Galotti, Nathan der Weise. Laocoon. Lectures. Fall, 9:30; Professor TRUSCOTT, 18 W.

11. Goethe. Study of his life; reading of Werther's Leiden; Iphigenie auf Taurus or Tasso; Faust, Part I. Winter, 9:30; Professor TRUSCOTT, 18 W.

12. Schiller. Study of his life; reading of Don Carlos; Wallenstein; Wilhelm Tell. Spring, 9:30; Professor TRUSCOTT, 18 W.

13. History of German Literature. From early times to 1500. This course is a study of the history of the literature, its beginnings and development, and lays stress upon the most important authors and the chief epochs. Reading and discussion of representative works. Selections from Das Nibelungenlied, das Gudrunslied, and the works of Hartman von Aue, Wolfram von Eschenbach, Gottfried von Strassburg, and Walther von der Vogelweide. Kluge's History of German Literature. Practice in writing German. Three meetings of class each week. Full course credit. Fall, 10:30; Professor TRUSCOTT, 18 W.

14. History of German Literature. From 1500 to 1800. Continuation of course 13. Selections from the works of Luther, Klopstock, Wieland, and Herder. Lessing, Goethe, and Schiller not considered. Kluge's History of German Literature. Practice in

writing German. Three meetings of class each week. Full course credit. Winter, 10:30; Professor TRUSCOTT, 18 W.

15. History of German Literature. From 1800 to 1900. Continuation of course 14. Selections from the works of Kleist, Grillparzer, Uhland, Hebbel, Ludwig, Keller, Meyer, Freytag, Wildenbruch, Sudermann, and Hauptmann. Heine not considered. Meyer's Geschichte der deutschen Litteratur im neunzehnten Jahrhundert. Practice in writing German. Three meetings of class each week. Full course credit.

Spring, 10:30; Professor TRUSCOTT, 18 W.

16. Scientific German. Intended for students in the scientific courses who have had at least a year of elementary German. The purpose is to teach the students to read at sight scientific articles in German. Hodge's German Science Reader; Cohn's Ueber Bakterien. Winter, 11:30; Mr. GRAVES, 19. W.

17. Journalistic German. Newspaper and magazine articles on various subjects. Prehn's Journalistic German; Lodeman's Germany of the Germans; New Yorker Staatszeitung.

Spring, 11:30; Mr. GRAVES, 19 W.

18. Historical German. A reading course in historical prose. Subjects taken from the political and literary history of Germany. Schrakamp's Erzaehlungen aus der deutschen Geschichte; Kostyak's Deutschland and die Deutschen; Schoenfeld's German Historical Prose; Freytag's Karl der Grosse. Prerequisite, three courses of German. Omitted in 1910-11.

Winter, 11:30; Mr. GRAVES, 19 W.

19. German Comedies. Three popular comedies will be studied: Lessing's Minna von Barnhelm; Gutzkow's Zopf und Schwert; Freytag's Die Journalisten. Composition once a week throughout the course. Prerequisite, four courses of German. Omitted in 1910-11. Spring, 11:30; Mr. GRAVES, 19 W.

GREEK LANGUAGE AND LITERATURE

Professor GREEN and Miss BUCHANAN

1. White's First Greek Book (Chapters I-XL). This course is for beginners. The work covers pronunciation, accent, declensions and conjugations, etymology of words, and simple transla-

tions from Greek into English and from English into Greek to illustrate the principles of grammar as given in the text.

Fall, 9:30; Miss BUCHANAN; 7 M.

2. **White's First Greek Book (Completed).** A continuation of course 1; much attention is paid to the vocabulary; daily exercises in sight reading. The first book of the Anabasis is read in connection with course 1 and 2. Prerequisite, Greek 1.

Winter, 9:30; Miss BUCHANAN, 7 M.

3. **Xenophon's Anabasis (Books II., III., and IV.).** Prose composition; a fuller knowledge of the grammar. Prerequisite Greek 1 and 2. Goodwin's Xenophon's Anabasis; Goodwin's Greek Grammar; Pearson's Greek Prose Composition.

Spring, 9:30; Miss BUCHANAN, 7 M.

4. **Select Readings.** Selections from the works of Xenophon and Herodotus; continued sight reading; review of Greek accidence and further study of syntax. Fall, 10:30; Professor GREEN, 30 L.

5. **Lysias' Orations.** Given alternately with Greek 7. A study of the form of Greek orations and Lysias's style; collateral library work assigned to each student; sight reading. Prerequisites, Greek 1, 2, 3, and 4, or their equivalent.

Winter, 10:30; Professor GREEN, 30 L.

6. **Homer's Iliad or Odyssey (Books I., II., and III.) and Homeric Verse** All the text is read metrically. Etymology, mythology, and prosody are studied in connection with the text. Seymour's Iliad. Collateral reading; Jebb's Introduction to Homer; Gladstone's Time and Place of Homer. Prerequisites, Greek 1, 2, 3, 4, 5. Spring, 10:30; Professor GREEN, 30 L.

7. **Lucian's Shorter Dialogues.** Given alternately with Greek 5. The Dialogues of the Dead and other short dialogues are read. Selections from Lucian by Williams. Omitted in 1909-10.

Winter, 10:30; Professor GREEN, 30 L.

8. **Aeschines Against Ctesiphon.** The aggressions of Philip of Macedon; the political institutions of Greece and the constitution of Athens are studied in connection with the text. Aeschines against Ctesiphon, by Richardson.

Fall, 9:30; Professor GREEN, 30 L.

9. **Plato's Apology and Crito.** A study of Athenian methods

of judicial procedure and criminal jurisprudence accompany the reading of the Apology. Dyer's Apology and Crito.

Fall, 11:30; Professor GREEN, 30 L.

10. Greek Literature in English Translation. The development of artistic forms of literary expressions among the Greeks. Some of the masterpieces of Greek literature are read in standard English translations. Written reports upon assigned readings. This course is intended for mature students of considerable experience in the study of language and literature, but no knowledge of the Greek language is required. Capps Homer to Theocritus. Collateral reading; Jebb's Greek Literature, Mahaffey's History of Greek Literature.

Fall, 8:30; Professor GREEN, 30 L.

11. Greek Literature in English Translation. A continuation of course 10, but deals especially with the drama and the development of literary prose. Winter, 8:30; Professor GREEN, 30 L.

12. Myths and Legends. A study of those myths and legends upon which a large number of ancient and modern classics are based and to which frequent reference is made in English literature. No knowledge of the Greek language is necessary. Prerequisite for major credit, Greek 5 or 7. Guerber's Myths of Greece and Rome.

Spring, 8:30; Professor GREEN, 30 L.

13. Aristophanes. The reading of one or more of the plays will be supplemented by lectures on the development of Greek comedy, and the influence of the comic drama upon social and political life at Athens.

Winter, 11:30; Professor GREEN, 30 L.

14. Euripides. One or more of the tragedies will be translated in class. Other plays by the same author will be read before the class by the instructor or studied by members of the class with the aid of standard translations. Incidental study of Greek metric.

Fall, hour to be arranged; Professor GREEN, 30 L.

15. Demosthenes on the Crown. Stress is laid on correct use of synonyms, Greek rhetoric, and oratory; freqnent sight translations. Demosthenes on the Crown, by Goodwin.

Winter, 9:30; Professor GREEN, 30 L.

16. Aeschylus' Prometheus Bound. History of the develop-

ment of dramatic art among the Greeks; study of the adaptation of epic and lyric forms to the purpose of the drama; much attention is given to the metrical system of the lyric passages. Allen's Prometheus Bound of Aeschylus.

Winter, hour to be arranged; Professor GREEN, 30 L.

17. The Antigone of Sophocles. A study of the Greek trilogy; lectures on the Greek theatre. D'Ooge's Antigone of Sophocles.

Spring, 11:30; Professor GREEN, 30 L.

18. New Testament Greek. A comparative study of the synoptic gospels. In the translation, pure, idiomatic English of the twentieth century is required. Westcott and Hort.

Spring, 9:30; Professor GREEN, 30 L.

19. Selected Odes of Pindar. Much attention is given to a practical mastery of the form. The poems are read rhythmically with the purpose of developing an appreciation of their lyrical excellence. Seymour's Odes of Pindar.

Spring, hour to be arranged; Professor GREEN, 30 L.

20. Seminar in Greek. Papers and discussions on assigned topics; large opportunities for original investigation and specialization. For graduate students and those well advanced in their college course, who desire to become specialists in this department. Credit is given for one-third of a course each quarter, or more, if the work accomplished justifies it.

Fall, Winter, and Spring, bi-weekly, 2:00-4:00; Professor GREEN, 30 L

HISTORY AND POLITICAL SCIENCE

Professor CALLAHAN and Professor CHITWOOD

The work offered in this department includes: (1) Continental European History, (2) English History, (3) American History, and (4) Political Science.

Instruction is given by lectures, text-book work, assigned collateral readings; preparation of papers, syllabi, and maps; special reports, recitations, and informal conferences.

Students are encouraged to observe and to read contemporary history and politics.

An association of those who are especially interested in the work of the department meets fortnightly for part of the year to hear the discussion of special topics and current problems.

An afternoon hour is designated for conferences and for direction of library work.

Continental European History

Professor Chitwood

Students who select continental European history as their principal study are advised to take at least one year in French, or German, in the early part of the University course.

Among the books of reference, which every student will often need to consult, are Ploetz's Epitome of Universal History and some good historical atlas, such as Putzger's Historischer Schul-Atlas.

8. Essentials of History: Mediaeval and Modern Ages. For college students who need a survey of the general field of history, emphasizing the epochal events. Spring, 11:30; 22 W.

9. History of Oriental Civilization. This is a general culture course, and a fitting introduction to the study of history. It begins with a survey of primitive society and traces the rise and development of human institutions. It directs especial attention to the early institutional history of China, Japan, India, Chaldea, Assyria, and Egypt, gives a survey of their contributions to civilization, and traces the development and influence of contact with the civilization of the west. It closes with a sketch of Hebrew history, an institutional study of the Bible and of the organization of the Christian Church. Omitted in 1910-11. Fall, 11:30; 22 W.

10. History of Greece. In this course the central idea is the development of civilized life as expressed in art, literature, and philosophy, in personal character and social customs, as well as in political ideas and institutions. An attempt will be made to gain an appreciation of what the Greeks were and what they gave to civilization. Fall, 8:30; 22 W.

11. History of Rome. A sketch of the Roman republic with special reference to the expansion of the Roman power and an intensive study of the empire. The aim in this course is to trace the development of Roman institutions, character, and civilization, to explain the genius of the Roman people for organization and government, and to call attention to the contributions of Rome to modern civilization. Winter, 8:30; 22 W.

12. Mediaeval History. This course begins with the period of institutional chaos following the breakup of the Roman empire, and ends with the rise of modern states. Special attention is devoted

to the three prime factors in the history of the middle ages,—the surviving civilization of Rome, the Christian church, and the German people. Political history, except in the case of France, is subordinated to the study of social and economic institutions—the church, feudalism, the crusades, schools and learning, commerce, and the rise of cities. Fall, 10:30; 22 W.

13. The Renaissance and the Reformation; 1300-1648. A transition from mediaeval to modern history. The development of the forces of modern civilization. Beginning with the survey of the economic, political, and intellectual conditions at the close of the middle ages, this course gives the student general knowledge of the rise and decline of the papal hierarchy, the renaissance in Italy and Germany, the protestant revolution in the principal European states, the counter-reformation, and the religious wars to the Treaty of Westphalia. Winter, 10:30; 22 W.

14. Continental European History since 1648. This course covers the rise of Prussia, the period of French ascendency, the revolutionary and Napoleonic eras, the period of reaction, the unification of Germany and Italy, and the progress of democracy in the nineteenth century. Spring, 10:30; 22 W.

In courses 12, 13, 14, special emphasis is given in alternate years to the history of France, or Germany.

15. Continental Europe in the Nineteenth Century. This course is devoted to an intensive study of political and social conditions in the more important states of Europe during the last hundred years. Somewhat extended reading is required of students taking this course, and the results of this reading is presented in the form of papers and reports. Omitted in 1910-11. Spring, 8:30; 22 W.

16. Seminar in European History. For advanced history students only. Spring, 2:00; 22 W.

English History.

Professor CALLAHAN

Students will find it convenient to own Low and Pulling's Dictionary of English History and Gardiner's Atlas.

Courses 17 and 18 or 19 and 20 furnish a good foundation for the study of American history and law.

17. History of England to the Tudors. A course in the general and institutional history of England. Special attention is given to political, economic, and social life and development; the more important subjects in constitutional history are considered, showing how England learned to govern herself.

Fall, 10:30; 4 M.

18. History of England from the Tudors to the Present Time. A continuation of course 17. The upbuilding of the British Empire and adjustment to new conditions. The constitutional and religious struggles of the sixteenth and seventeenth centuries; economic and social changes; international relations; development of a sea power; struggle for colonial and commercial supremacy; and the formation of modern conditions and institutions.

Winter, 10:30; 4 M.

19. English Social and Industrial History. A survey of the facts of social and industrial evolution and their relation to political history and the interpretation of present conditions; a study of the enlargement of English life and the growth of English institutions.

Spring, 10:30; 4 M.

20. English Historical and Practical Politics: English Constitutional Law and History. A seminar course arranged especially for advanced students in history who desire a suitable preparation for courses in American government and law. Prerequisite, a general outline knowledge of English history and course 17, 18 or 19.

Spring, hour to be arranged; 4 M.

American History.

Professor CALLAHAN

All students of American history should have Channing and Hart's Guide, and McCoun's Historical Geography of the United States.

21. American Colonial History (1492-1776). European background; economic and political conditions in Europe before the search for new trade routes; evolution of discovery and settlement; Spanish colonial problems, policy, and progress; growth of the English settlements into colonies; origin and development of American institutions; views of colonial, social, and economic life; French colonial policy; the conflict between the English and new

France; relation of the colonies to England; adaptation of European civilization to American conditions; the separation of the colonies from England. Fall, 9:30; 4 M.

22. The Formation of the Union: American Political History (1776-1829). The revolution, the critical period, the formation of the constitution, the organization of the government, the struggle for neutrality and the development of nationality, the expansion of the Union, and the triumph of democracy. Special attention is given to political and constitutional development and to international relations, but industrial and social growth is also treated. Winter, 9:30; 4 M.

23. Division and Reunion: American Political History Since 1829. Economic questions and the slavery contest; the growth of sectional differences, culminating in the secession movement; the Civil War and its problems, the overthrow of the slave power, and readjustment; a brief survey of the political and social questions since the Civil War, and of the development of the resources of the country. Spring, 9:30; 4 M.

In courses 21, 22, and 23, while special emphasis is laid on political and constitutional history, much attention is given to social and economic conditions.

26. History of American Diplomacy and Foreign Policy (1776-1909). A general survey of the negotiations, treaties, arbitrations, congresses, etc., to which the United States has been a party; the fundamental principles of American policy; a study of the most important phases of American international relations; America's influence on international law and diplomacy; the state department and its most distinguished secretaries. Omitted in 1910-11. Winter, 11:30; 4 M.

29. American Social and Economic History. The story of the economic achievements of the American people. A historical basis that is essential to the proper study of economics. Beginning with the exploration and settlement that led to colonization, the student traces the growth and expansion of manufactures, agriculture, commerce, transportation, population, and labor from the simple agricultural communities of the colonies to the complex industrial and commercial organization of to-day. He learns how to acquire the information which is a necessary preliminary for the solution of present day industrial, financial, and commercial problems. Spring, 11:30; 4 M.

32. History of West Virginia. Co-operative investigations in social, economic, political and constitutional development; state legislation is studied as far as possible from documentary material; considerable attention is given to railroad development and the growth of towns; an effort is made to collect historical material from different parts of the state. A seminar course.

Winter or Spring, 8:30; 4 M. and Library.

34. Seminar in American History. A research course supplemented by lectures. Exclusively for students taking history as their major. Among the subjects recently studied were the Monroe doctrine, relations of the United States with Spanish America, and the American Cuban policy. Students are required to take notes, to investigate assigned topics, and to become acquainted with the original materials that are accessible. Proper attention is given to scientific methods of historical research, construction, and interpretation. Theses in American history are prepared in connection with this work. Fall, 11:30; Library.

The attention of students taking American History is invited to the announcement of the Bryan prize on page 50.

Political Science.

In all these courses, students should have a clear knowledge of the outlines of general history and especially of modern political history.

35. American Practical Politics: The Government at Work. A practical study of the actual workings of the government and politics of the United States, both state and national; the growth, spirit, machinery, operations, and functions of the government, the relations, rights and duties of citizens, the policies of state on public questions and problems. Special attention is given to the realities of governments and institutions, and to the personal interest and personal action which underlie constitutions and statutes.

Open to students who have a familiar knowledge of the period covered by courses 22 and 23.

Winter, 11:30; Professor CALLAHAN, 4 M.

36. European Historical and Practical Politics. A historical study of the development of the political institutions, constitutional governments, and parties of Continental Europe; a comparative study of Greek, Roman, and Teutonic polity, and of the govern-

ments and parties of the leading countries of modern Europe. Special attention is given to recent European politics. Open to advanced students who have had thorough courses in European history, especially course 14.

Spring, 8:30; Professor CHITWOOD, 22 W.

40. Municipal Government.

Professor CALLAHAN, 4 M.

42. Anglo-American Historical Jurisprudence. A study of the sources and growth of law and the development of legal institutions in connection with social and political history. Adapted especially to advanced students of history who are preparing for the study of law. Fall, 8:30; Professor CALLAHAN, 4 M.

HORTICULTURE

Credit will be given in the College of Arts and Sciences for three courses in this subject given in the College of Agriculture. See page 173.

LATIN LANGUAGE AND LITERATURE

Professor F. B. TROTTER, and Professor HARE.

The courses in this department are arranged by subjects and are not intended to be taken consecutively. Courses 6, 7, 8, and 9 may be counted as either preparatory or college work, but are prerequisite to the following courses. Courses 10, 11, and 17 are required of candidates for the A.B. degree unless they elect Greek. In addition to these, courses 12, 13, 14, and 34 are required of all students who make Latin their major. After the completion of these courses, such other courses will be open to students as, in the opinion of the instructors, they are qualified to enter. Students making Latin their major are required to take as collateral work History 10 and 11. (See page 92.)

6. Cicero's Orations against Catiline, I., II., and III.

Spring, 10:30; Professor HARE, 11 M.

7. Cicero's Fourth Oration against Catiline, the Oration for Archias, and the Aeneid of Vigil (Book 1).

Fall, 9:30; Professor HARE, 11 M.

8. Virgil's Aeneid. (Books II, III, and IV.)

Winter, 9:30; Professor HARE, 11 M.

9. **Virgil's Aeneid (Books IV., V., and VII.)**
Spring, 9:30; Professor HARE, 11 M.

Latin Composition is required once a week in courses 7, 8, and 9.

10. **Cicero's De Amicitia and De Senectute**, with study of synonyms. Fall, 9:30; Professor TROTTER, 21 W.

11. **Horace's Odes and Epodes**, with scanning.
Spring, 9:30; Professor TROTTER, 21 W.

12. **Horace's Satires and Epistles**, with scanning.
Spring, 8:30; Professor TROTTER, 21 W.

13. **Cicero's De Officiis or Tusculan Disputations**, with study of synonyms. Co-ordinate with course 5 in Philosophy.
Fall, 8:30; Professor TROTTER, 21 W.

14. **Seneca's Moral Essays**, with a study of his times. Co-ordinate with course 5 in Philosophy.
Winter, 8:30; Professor TROTTER, 21 W.

15. **Lucretius' De Rerum Natura**, with a study of his doctrines.
Hour to be arranged; Professor TROTTER, 21 W.

16. **Cicero's Letters**, with a study of the great orator's times.
Hour to be arranged; Professor TROTTER, 21 W.

17. **Livy, Books XXI and XXII**, with a study of Roman history, or, if thought advisable, Sallust and other selections from history. Co-ordinate with course 11 in History.
Winter, 9:30; Professor TROTTER, 21 W.

18. **Tacitus' Germania, Dialogues and Agricola, or Historiae or Annales**, with a study of the early Empire.
Hour to be arranged; Professor TROTTER, 21 W.

19. **Plautus' Captivi, Trinummus, and Rudens**, with a study of the Roman stage. Spring, 10:30; Professor TROTTER, 21 W.

20. **Terence's Adelphoe, Phormio and Heauton Timoreumenos**, with study of Greek and Roman drama.
Winter, 11:30; Professor TROTTER, 21 W.

21. Seneca's Medea, Hercules Furens, and Oedipus, with study of tragedy.

Spring, 11:30; Professor TROTTER, 21 W.

23. Juvenal's Satires, with a study of contemporaneous history,
Fall, 11:30; Professor TROTTER, 21 W.

31. Cicero's De Oratore or Brutus.
Fall, 10:30; Professor TROTTER, 21 W.

32. Quintilian's Institutions, Books X and XII.
Hours to be arranged; Professor TROTTER, 21 W.

34. Latin Composition. Gildersleeve & Lodge's Latin Writer or an equivalent text is used. Careful study and review of grammar. Winter, 10:30; Professor TROTTER, 21 W.

NOTE:—All the above college courses will be offered for students properly qualified, but not more than twelve in any one year.

LAW

Credit will be given in the College of Arts and Sciences for 5 courses in this subject given in the College of Law. See page 182.

MATHEMATICS

Professor EIESLAND

7. Solid Geometry.
Fall, 11:30; Spring, 9:30; (————); 7 M.

8. Advanced Algebra.
Fall, 10:30; Winter, 11:30; Professor EIESLAND, 14 W.

9. Plane and Spherical Trigonometry.
Winter, 10:30; Spring, 11:30; Professor EIESLAND, 14 W.

11. Plane Analytical Geometry. This course includes elementary work in curve tracing. Prerequisite, course 8. (Bailey & Woods). Spring, 10:30; Fall, 9:30; Professor EIESLAND, 14 W.

12. Analytic Geometry of Space. Quadric surfaces. (Salmon). Winter, 2:00; Professor EIESLAND, 14 W.

13. Determinants and Introduction to Higher Algebra (Bocher). Prerequisite, courses 8, 15 and 16.

Fall, 2:00; Professor EIESLAND, 14 W.

15. Differential and Integral Calculus. (Osgood).

Fall, 8:30; Winter, 11:30; Professor EIESLAND, 14 W.

16. Differential and Integral Calculus. This course is a continuation of course 15. (Osgood).

Winter, 8:30; Spring, 11:30; Professor EIESLAND, 14 W.

18. Differential Equations. Total and partial differential equations with applications to physics and mechanics. (Cohen). Prerequisite courses 15 and 16.

Fall and Spring, 2:00; Professor EIESLAND, 14 W.

The following courses have been given during the last three years and are offered at hours to be arranged.

21. A Teacher's Course. Brief survey of secondary mathematics from the modern view-point. Elements of Non-Euclidean Geometry.

22. A Course in Analysis, based on Goursat.

23. Theory of Attraction and Fourier's Series.

24. Modern Projective Geometry.

Astronomy

1. Descriptive Astronomy. Practice with sextant and portable transit instrument. Prerequisite, Mathematics 9.

Winter, 9:30; Professor EIESLAND, 14 W.

MECHANICAL ENGINEERING

Credit will be given in the College of Arts and Sciences for certain courses in this subject given in the College of Engineering. See page 136.

MECHANICS AND APPLIED MATHEMATICS

Credit will be given in the College of Arts and Sciences for certain courses in this subject given in the College of Engineering. See page 136.

MUSIC

Miss FOSTER

1. **Harmony.** This course is designed to be a part of the general musical education of all students in the School of Music. It is of special assistance in the study of the piano, but is of value in every department of musical work. One-third course.

2. **Harmony.** Continuation of course 2. One-third course.

3. **Harmony.** Continuation of course 2. One-third course.

4. **Counterpoint.** This course is of specific benefit to pianists and to teachers of music. Prerequisite, course 1-3 in harmony. One-third course.

5. **Counterpoint.** Continuation of course 4. One-third course.

6. **History of Music.** Knowledge of the origin and development of music is a requisite in a musical education. The course, though not extensive, is designed to acquaint the student with the fundamental and most important facts of the art. One-third course.

7. **History of Music.** Continuation of course 6. One-third course.

PHILOSOPHY

President PURINTON and Professor DEAHL

1. **Logic and Principles of Science.** A study of the processes of conception, judgment, and reasoning; nature and laws of experience, induction, and subsidiary processes, such as observation, experiment, classification and hypothesis; inductive methods; imperfect inductions and fallacies; elements of deduction and formal logic. Recitations, lectures, and notes by the instructor, and references to standard authorities. Fall, 8:30; Professor DEAHL, 24 W.

2. **Psychology.** An introductory course devoted to the study of the states of consciousness and mental processes, with an outline of the structure and functions of the nervous system ;the principles and methods of mental training and the application of psychology

to education. Lectures and text-book work with experiments and seminar work in standard authors.

Fall, 9:30; President PURINTON, 10 S.

3. **Ethics.** A survey of the mental processes that control conduct; fundamentals of morality, the moral faculty, ground of obligation, moral standard, moral law, moral sanction; moral culture; practical morality; personal and social duties; a review of historical ethics. Lectures, with reference to standard text-books. Winter, 9:30; President PURINTON, 10 S.

4. **Christian Evidence.** An outline of the historical and moral proofs concerning the Christian system; a brief comparative view of other religious systems.

Spring, 9:30; President PURINTON, 10 S.

5. **History of Philosophy.** An introduction to the study of philosophy, with an outline of the history of the leading philosophers and schools, ancient, mediæval, and modern. Lectures, with references to best standard works. Fall, 2:00; 14 S.

6. **Mediaeval Philosophy.** Especially the influence of Christianity upon philosophy and vice versa, and the rise and content of patristic philosophy. Winter, 2:00; 14 S.

PHYSICAL TRAINING

Director CHEZ and Mrs. CHEZ

The purpose of the physical department is the development or restoration of the physical well-being of students attending the University. The director examines each student and prescribes exercises for his individual need. Special attention is given to those who are constitutionally weak.

An exhibition of class and apparatus work is given each year.

Men's Department.

Director CHEZ

The work is graded as much as possible to suit the needs of the students. Careful attention is given to correction of bad postural habits and to all-around development and training of the body. Drills are given in free-hand exercises, dumb-bells, Indian clubs, and wands.

Recreation in the form of games, such as basket ball, three-deep, slipper, etc., follows the regular class work. Play conduces to health, physical development, and mental relaxation; therefore, these games are encouraged after class work.

Heavy gymnastics, which includes German horse, parallel bars, horizontal and vaulting bars, tumbling, wrestling, and fencing, is given to the advanced classes. A gymnastic team is organized each year.

Women's Department.

Mrs. CHEZ

The Swedish system is taught and a graded course pursued. First year students, after a careful anthropometric examination, are given developing exercises in Swedish gymnastics, together with such special work as is suited to individual needs. Following this foundation work, advanced exercises are added, which include drills with dumb bells, Indian clubs, and wands, and the Gilbert fancy steps. Athletic games, such as basket ball and field hockey, are begun the latter part of the first year and continued throughout the course. Only third and fourth year students are eligible to the Women's "Varsity" teams.

The hours for the regular classes in indoor work are 2:00 to 3:00 p. m. on Mondays and 4:00 to 5:30 p. m. on Tuesdays and Thursdays. Until November 1 and after May 1 outdoor work in tennis is carried on from 3:00 to 5:30 p. m. Classes for public school pupils are conducted on Saturdays between 9:00 and 12:00 a. m.

PHYSICS

Professor WAGGONER and Mr. POST

The various courses offered in physics are designed to meet the needs of the students in the College of Arts and Sciences and in the College of Engineering. For students who expect to teach physics the laboratory offers unusual facilities for individual laboratory work and the construction of apparatus. The department is provided with lecture rooms, general physical laboratories, optical and photometer rooms and electrical testing and standardizing rooms. The University Library has on file the current numbers of most of the standard journals of physics.

1. Elementary Physics. Recitations four times a week and laboratory one period of two hours a week. Prerequisite, Algebra 3 and plane geometry.

Fall, Monday, Wednesday, Thursday and Friday, 8:30; Laboratory, Monday or Thursday, 1:30; Mr. POST; 2 S.

2. Elementary Physics. A continuation of course 1, which is a prerequisite. Winter, 8:30; hours as in course 1; Mr. POST; 2 S.

4. Experimental Physics. A laboratory course exclusively, consisting of a graded series of quantitative experiments to suit the individual needs of the student. Prerequisites, Physics 1 and 2, or equivalent work, and plane trigonometry. Given in fall, winter, and spring quarters, one-third course each quarter, or full course in fall or spring.

Hours to be arranged; Professor WAGGONER and Mr. POST; 14 S.

6. General Physics: Mechanics. Lectures and recitations based on Duff's Physics. Required of all candidates for engineering degrees. Prerequisite, analytical geometry.

Fall, Monday, Wednesday, Thursday, and Friday, 9:30; Professor WAGGONER; 11 S.

Laboratory, one period a week of two hours. Tuesday, 9:30, and 1:30; Wednesday, 1:30; Professor WAGGONER and Mr. POST; 12 S.

7. General Physics. A continuation of course 6. Heat, magnetism, and electricity.

Winter, hours as in course 6; Professor WAGGONER, 11 S.

8. General Physics. A continuation of courses 6 and 7. Wave motion, sound and light.

Spring, hours as in course 6; Professor WAGGONER, 11 S.

10. Experimental Physics. A laboratory course in physics open only to agricultural students. The work consists of quantitative experiments in applied mechanics, density, hygrometry, meteorology and the physics of soils. Prerequisites, Physics 1 and 2.

Spring, Monday and Thursday, 1:30 to 3:30; Professor WAGGONER, 12 S.

11. Applied Electricity. Required for the degree of B. S. M. E. Fundamental principles, complex quantities, harmonic functions, laws of magnetic and electrical circuits, including graphical and analytical treatment of resistance, inductance, capacity and the theory of electrical measurements. Prerequisites, Physics 6, 7 and 8, and integral calculus. Three-fifths course.

Winter, Monday, Wednesday and Friday, 10:30; Professor WAGGONER, 11 S.

12. Applied Electricity. A continuation of Physics 11, which is a prerequisite. An introduction to the general theory of dynamos and motors, alternating and direct; their construction and operation.

Spring, 10:30; Laboratory hours to be arranged; Professor WAGGONER; 11 S.

14. Applied Electricity. Required for the degree B. S. C. E. The application of electricity for power, lighting and manufacturing processes, also an elementary discussion of generators and electrical transmission. Prerequisites, Physics 6, 7, and 8, and integral calculus.

Winter, 11:30; Professor WAGGONER; 11 S.

16. Advanced Physical Laboratory. Precise measurements in physics. A laboratory course open only to students who have completed Physics 6, 7 and 8 and integral calculus.

Hours to be arranged; Professor WAGGONER; 11 S.

18. Heat, Molecular Physics, and Thermo-Dynamics. Lectures and laboratory; based on Edser's "Heat for Anvanced Students." The laboratory consists of the critical study of thermometers and pyrometers, their construction, calibration and use in high temperature measurements, electric furnace construction, quantitative determination of the various heat quantities and the melting and boiling points of various metals and fluids. Prerequisites, Physics 6, 7 and 8 and integral calculus.

Fall, Monday, Wednesday, and Friday, 10:30; laboratory, Thursday, 1:30 to 4:30; Professor WAGGONER; 11 S.

20. Light. Lectures and laboratory based on Edson's "Light." The laboratory work consists of the study of various optical lens systems, spectrum analysis, the use of the polariscope and the methods of artificial illumination. Prerequisites, Physics 6, 7 and 8, and integral calculus. Omitted in 1909-11.

Fall, Monday, Wednesday and Friday, 10:30; Laboratory, Thursday, 1:30 to 4:30; Professor WAGGONER; 11 S.

ROMANCE LANGUAGES AND LITERATURES.

Assistant Professor STATHERS, Mr. DARBY and Mr. FINNEY,

French.

1. Elementary Course. Grammar, reading, and composition. Stress is laid on the pronoun and the conjugation of the verb. Con-

stant practice in pronunciation and oral understanding. Fraser and Squair's French Grammar; Aldrich and Foster's French Reader.

Fall, first section, 8:30, Professor STATHERS, 11 W.; second section, 9:30; Mr. DARBY, 2 M.

2. **Elementary Course.** A continuation of course 1. Grammar, reading, and composition, with continued practice in pronunciation, and oral understanding. Fraser and Squair's French Grammar; Aldrich and Foster's French Reader.

Winter, first section, 8:30; Professor STATHERS, 11 W.; second section, 9:30; Mr. DARBY, 2 M.

3. **Elementary Course.** A continuation of course 2. Grammar, reading, composition, and oral understanding. Halévy's L'Abbé Constantin or Verne's Vingt mille Lieues sous les Mers.

Spring, first section, 8:30; Professor STATHERS, 11 W.; second section, 9:30; Mr. DARBY, 2 M.

4. **Fiction of the Nineteenth Century.** Reading of Merimeé's Colomba, Balzac's Contes, and George Sand's La Petite Fadette. Composition once a week. Particular attention giyen to pronunciation and oral understanding.

Fall, 8:30; Mr. DARBY, 2 M.

5. **Fiction of the Nineteenth Century.** A continuation of course 4, with additional emphasis on syntax and idioms. Alphonse Daudet's Tartarin de Tarascon, Pierre Loti's Pêcheur D'Island, and Anatole France's Le Crime de Sylvestre Bonnard. Composition

Winter, 8:30; Mr. DARBY, 2 M.

6. **France and the French People of To-day.** Study of the country from a commercial and geographical standpoint; Parisian and provincial life; reading and discussion in French of magazine articles and questions of popular interest. Daily theme work and as much French conversation as practicable. Work largely based on Foncin's Le Pays de France.

Spring, 8:30; Mr. DARBY, 2 M.

7. **Literature of the Seventeenth Century before 1660.** The work centers on the life and writings of Corneille but is accompanied by lectures on the origin of the drama, development of the language and influence of Corneille's precursors and contemporaries. Essays, collateral reading and reports.

Fall, 9:30; Professor STATHERS, 11 W.

8. **Literature of the Seventeenth Century after 1660.** Study in class of representative works of authors of the period. Lec-

tures on the literature, society and political history of the reign of Louis XIV. Essays, collateral reading and reports.

Winter, 9:30; Professor STATHERS, 11 W.

9. **Literature of the Eighteenth Century.** Study of the lives and works of Voltaire, Beaumarchais, Lesage, Montesquieu, Diderot and Rousseau. Lectures and papers on the religious, political and philosophical questions of the century.

Spring, 9:30; Professor STATHERS, 11 W.

10. **Advanced Prose Composition and Conversation.** The aim is to give facility in idiomatic expression both in writing and in speakiqg. The work includes paraphrasing, translation and discussions in French based on subjects of moderate difficulty and is accompanied by a systematic review of French syntax. Omitted in 1910-11. Fall, 10:30; Professor STATHERS, 11 W.

11. **Advanced Discourse and Phonetics.** Designed for those who desire fluency in intricate construction of the language and for those who expect to teach it. The course includes the study of phonetics and grammatical construction and the discussion of books, periodicals, courses of study and class-room problems. Daily themes and collateral reading. Omitted in 1910-11.

Winter, 10:30; Professor STATHERS, 11 W.

12. **Historical French Grammar.** Study of the origin and development of modern French syntax from popular Latin through old French and the various formative periods of the language. Reading of selected works best suited to illustrate this development. Omitted in 1910-11.

Spring, 10:30; Professor STATHERS, 11 W.

13. **The Romantic Movement.** Lectures on the origin, development and decline of romanticism. Study of representative works of the first half of the nineteenth century. The Cénacle and its influence. Essays, reading and reports.

Fall, 10:30; Professor STATHERS, 11 W.

14. **French Literature since 1850.** Careful study of the different literary groups and schools of the period, critical reading of representative works of leading authors and lectures on the contemporary drama, novel, and short story.

Winter, 10:30; Professor STATHERS, 11 W.

15. **Lyric Poetry.** Critical reading of representative poems from Villon to the present time. Versification and poetic forms; lives and works of the leading poets. Special attention is given

to Ronsard, Malherbe, Chénier, Lamartine, Hugo, Vigny, Musset, the Parnassians and the Symbolists.

Spring, 10:30; Professor STATHERS, 11 W.

NOTE:—When the demand is sufficient, advanced courses are offered qualified students as follows:

16. Literary Criticism in France. The Nineteenth century especially, studied in the works of Sainte-Beuve, Lemaitre, Faguet, Taine ,and Brunetière.

17. Literature of the Sixteenth Century. Selections from Rabelais, Marot, and Montaigne; Ronsard and the Pléiade; Darmesteter and Hatzfeld, Le Seizième Siècle en France.

18. Old French Readings. Inflection, derivation and syntax. Paris et Langlois: Chrestomathie du Moyen Age; Paris: Extraits de la Chanson de Roland.

19. Old French Readings and Phonetics. A continuation of course 18. Bartsch and Horning's La Langue et la Littérature francaise depuis le neuvième siècle jusqu' au quatorzième siècle. Development of phonetic laws in transition from Latin to French.

Spanish

Assistant Professor STATHERS and Mr. DARBY

The following courses have in view both the study of literature and the application of the language to commercial uses and conversation. The close relations of our country with those of Spanish America necessitate the study of Spanish as a living and not as a dead language. Hence, while due attention is given to the rich literature of Spain, full opportunities are offered to acquire a practical knowledge of the language.

1. Elementary Course. Grammar and reading, with practice in pronunciation, composition, and oral understanding. Hill and Ford's Spanish Grammar and Hill's Spanish Tales.

Fall, 10:30; Mr. DARBY or Professor STATHERS, 2 M.

2. Intermediate Spanish. Grammar, oral exercises, easy conversation, and select readings from contemporary authors. Hill's and Ford's Spanish Grammar and Fontaines' Flores de España.

Winter, 10:30; Mr. DARBY or Professor STATHERS, 2 M.

3. Modern Fiction. Study of two or three works to be selected from the following: Perez-Galdós' Doña Perfecta and Ma-

rianela; Valdés' José and La Alegriá del Capitán Ribot; Valera's El Pájaro Verde; Alarcán's El Capitán Veneno and El Niño de la Bóla.

Spring, 10:30; Mr. DARBY or Professor STATHERS, 2 M.

4. Modern Drama. Careful study of Perez-Galdós' Electra, Nuñez del Arce's El Haz de Leña, and Moratín's El Sí de las Niñas. Composition once a week throughout the course, with special emphasis on syntax and idioms.

Fall, 11:30; Professor STATHERS, 11 W.

5. Commercial Spanish and Current Magazine Literature. Business correspondence and commercial terms; conversation in Spanish on topics relating to travel, daily life, and questions of present interest; reading selected from Spanish newspapers and magazine articles of the day; essays and advanced composition.

Winter, 11:30; Professor STATHERS, 11 W.

6. Classic Drama and the Age of Cervantes. Critical reading of Lope de Vega's La Estrella de Sevilla, Calderón's La Vida es Sueño, and etxracts from Cervantes' Don Quixote de la Mancha. Papers on the lives, works, and times of these authors.

Spring, 11:30; Professor STATHERS, 11 W.

Italian

Mr. DARBY

It is desirable that students beginning Italian should have some knowledge of Latin.

1. Elementary Course. Pronunciation, elementary grammar, easy reading, composition, and oral understanding. Young's Italian Grammar; Bowen's Italian Reader. Fall, 11:30, 2 M

2. Elementary Course. A continuation of course 1. Grammar, reading, dictation, and composition, with continued practice in pronunciation and oral understanding. Young's Italian Grammar; Bowen's Italian Reader. Winter, 11:30, 2 M

3. Elementary Course. A continuation of course 2. Young's Italian Grammar; Manzoni's I Promessi Sposi.

Spring, 11:30, 2 M

4. Readings in Modern Italian. Selected from the works of Pellico, Amicis, Farina, Del Testa, Barrilii, Serao, and Verga. Grandgent's Italian Composition.

5. **Italian Drama of the Eighteenth Century.** Selected plays of Metastasio, Alfieri and Goldoni. Composition.

6. **Introduction of the Study of Dante.** Selections from La Vita Nuova and La Divina Commedia.

NOTE:—When the demand is sufficient courses 4, 5, and 6 may be given instead of courses 1, 2, and 3.

ZOOLOGY

Professor REESE and an assistant.

The courses in this department are intended to serve as a means of general culture and to prepare students to become investigation and teachers of zoology. A wide field is offered for valuable investigation in the organization, functions, habits, and evolution of animal life. Upon the results of such investigations rest to a large extent the science of medicine, psychology, and sociology. Courses 1, 2, 3, and 10 are of especial interest to teachers. Courses 1, 2, 3, 6 and 7 are required of students in the six-year medical course.

1. **Animal Biology.** A study of invertebrate animals. The study of structure is conducted with constant reference to function and adaptation, and the student performs simple experiments on the behavior of protozoa, hydra, earth worm, etc. The lectures deal with the structure and physiology of the cell. reproduction, symbiosis, commensalism, etc. Three lectures and four hours laboratory work per week.

Fall, Monday, Wednesday and Friday, 8:30; laboratory, Tuesday and Wednesday, 1:30; 17 W.

2. **Vertebrate Zoology.** Dissection of the dogfish, perch, mudpuppy or frog, turtle and cat; lectures on the biology, comparative anatomy, and evolution of vertebrates. Two lectures and six hours laboratory work per week.

Winter, Monday and Wednesday, 8:30; Laboratory, Tuesday, Wednesday, and Thursday, 1:30; 17 W.

3. **Vertebrate Zoology.** Continuation of course 2.

Spring Monday and Wednesday, 8:30; Laboratory, Tuesday, Wednesday, and Thursday, 1:30; 17 W.

6. **Vertebrate Embryology.** Cleavage, gastrulation and the formation of the germ layers are studied in the frog and the chick, the development of organs in the chick and the pig. These materials

are supplemented by serial sections, dissections, and cleared preparations of human embryos in various stages. The lectures deal chiefly with human development. Reese's Introduction to Vertebrate Embryology, 2nd edition. Prerequisites, courses 2 and 3, or an equivalent. Fall, 10:30-12:30; 17 W.

7. **Vertebrate Neurology.** Dissection of the central and peripheral nervous systems of several vertebrates and study of the components of the cranial nerves and the centers and fiber tracts in the brain of one or more fishes, an amphibian, a reptile, and a mammal. Burkholder's Anatomy of the Brain with additional lectures and collateral reading. Prerequisites courses 1, 2, 3, and 6.
Spring, hour to be arranged; 17 W.

9. **Methods in Zoology.** A practical course in the methods of collecting, hatching and rearing, preserving, injecting, and making microscopic preparations. Open to all students with major in zoology who have had courses 1, 2, and 3, and to others by special permission. Credit in proportion to the work done.
Fall, Winter, Spring; 17 W.

10. **Principles of Biology.** This course deals with the conditions of animal life and the means of adaptation. It includes the study of habits, reactions, food relations, coloration, regeneration, etc.; the course of organic evolution; theories regarding the origin of species, heredity, etc. Lectures, demonstrations, and assigned readings. Prerequisite, course 1, or an equivalent.
Winter, hour to be arranged; 17 W.

NOTE:—Course 10 may be given at other times, if there is sufficient demand.

15. **Comparative Embryology and Anatomy of Animals.** Advanced course. 17 W.

16. **Comparative Embryology and Anatomy of Animals.** A continuation of course 15. 17 W.

19. **Current Literature.** The advanced students form a journal club, which meets weekly for reports and discussion of recent literature. One course credit for the year. 17 W.

20. **Research Work.** Properly qualified students may undertake research work upon the morphology or physiology of animals. Credit in proportion to the work done. 17 W.

NOTE:—Courses 15, 16, 19, and 20 are for graduates or other advanced students and may be taken at any time ,

THE COLLEGE OF ENGINEERING AND MECHANIC ARTS

FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

FREDERICK LINCOLN EMORY, M.M.E., M.E., *Professor of Mechanics and Applied Mathematics*

CLEMENT ROSS JONES, M.M.E., *Professor of Mechanical Engineering*

WILL HAZEN BOUGHTON, C.E., *Professor of Civil Engineering*

RUSSELL LOVE MORRIS, C.E., *Professor of Civil Engineering*

EDWIN FAYETTE CHURCH, JR., M.S., *Professor of Machine Design*

WILLIAM ELMORE DICKINSON, A.B., M.M.E., *Professor of Electrical Engineering*

ROBERT BRUCE BRINSMADE, B.S., E.M., *Professor of Mining Engineering*

JOHN B. GRUMBEIN, B.S.M.E., *Instructor in Mechanical Engineering and Foreman of Wood Shop*

THOMAS HOWARD CATHER, *Instructor in Machine Shop and General Foreman of Shops*

RUFUS A. WEST, *Assistant in Metal Working and Stationary Engineer*

ALEXANDER REID WHITEHILL, PH.D., *Professor of Chemistry*

SAMUEL B. BROWN, A.M., *Professor of Geology and Mineralogy*

FREDERICK WILSON TRUSCOTT, PH.D., *Professor of Germanic Languages and Literatures*

FREDERICK LAWRENCE KORTRIGHT, D.SC., *Professor of Chemistry*

JOHN ARNDT EIESLAND, PH.D., *Professor of Mathematics*

CHAUNCEY WILLIAM WAGGONER, PH.D., B.S.E.E., *Professor of Physics*

WILLIAM JACKSON LEONARD, *Associate Professor of Fine Arts*

MADISON STATHERS, PH.D., *Assistant Professor of Romance Languages*

CLARENCE POST, A.B., *Instructor in Physics*

ARTHUR R. GRAVES, A.M., *Instructor in Germanic Languages and Literatures*

ARLEIGH LEE DARBY, A.M., *Instructor in Romance Languages*

ORGANIZATION

This College comprises the following departments:

Civil Engineering;
Mechanical and Electrical Engineering and the Mechanic Arts;
Mining Engineering;
Mechanics and Applied Mathematics.

The requirements for admission and graduation, the arrangement of the courses of instruction, and such other work as pertains to this College, are provided for by its faculty, in conjunction with the University Council.

BUILDINGS AND EQUIPMENT

All instruction in engineering subjects is centralized in the Mechanical Hall. This building is located on the southeast corner of the campus and fronts the athletic field. It really consists of two buildings connected by covered passageways. The main building is 168½ feet long and three stories high, with a well-lighted basement running under its entire length. In this building are the

lecture, recitation, drawing, and instruction rooms of the various engineering departments, the machine and woodworking shops, and the mechanical and electrical laboratories. The rear building known as the power plant, is one story in height and contains the boiler and engine rooms, the forge shop, the foundry, and the sheet metal and pipe fitting shop. The drawing rooms, shops, power plant, and laboratories are equipped with modern apparatus and machinery for practical and experimental work.

In the drawing rooms are collections of models of bridges, furnaces, structures, mechanisms, engines, pumps, valves and valve gears; descriptive geometry models; sets of charts, state and government maps, surveys, photographs, engineering specifications drawings, tracings, and blue prints. In connection with the drawing rooms there is a blue printing and photographic room and dark closet, equipped with electric and sun printing apparatus and photographic outfit.

The shops consist of a woodworking shop, forge shop, foundry, machine shop, and sheet metal and pipe fitting shop. Each work shop occupies a separate room and is independently equipped with suitable benches, measuring instruments, tools, shop appliances, and machines, such as are ordinarily installed in the larger engineering colleges and commercial shops. These afford ample facilities for performing all the fundamental operations in machine construction and for building machines of moderate size.

The power plant equipment consists of different types of steam and gas engines, direct-connected or belted to electric generators; a 75 K. W. Westinghouse condensing steam turbine direct-connected to a direct current generator; steam boilers, equipped for burning both gas and coal; an independently fired superheater; pumps, condensers, air compressors, steam traps and other auxiliary apparatus, providing the means for furnishing any desired kind of power. The power for the shops and laboratories is ordinarily obtained from a 50 H. P. Westinghouse two-cylinder gas engine, direct-connected to a 37½ K. W. Westinghouse direct-current generator, from which it is distributed to motors or other apparatus, but this can be increased by operating independently, or in parallel, one or more additional machines driven by the steam turbine, the steam engines, or by a rotary converter connected with the city mains. Single and two-phase alternating current may be obtained from city mains, and one, two, and three-phase current may be developed by a double-current dynamo driven as an inverse converter or as an alternating current dynamo.

The engineering laboratories are fitted with standard gauges, measuring, calculating, and recording instruments; apparatus and appliances for qualitative and quantitative experimental work in

civil, mechanical, steam, hydraulic, electrical and mining engineering.

The testing laboratory is equipped with apparatus and machines for testing cement, iron, steel, brick, stone, and other materials of engineering. The principal machines and apparatus are an Olson testing machine of 400,000 pounds capacity, taking tension and compression specimens up to six feet, and beams up to sixteen feet in length; a 50,000-pound Riehle testing machine; a 20,000-pound Riehle automatic and autographic testing machine; a 10,000-pound Olsen transverse testing machine; a 60,000 inch-pound Riehle-Miller torsion machine; two Fairbanks cement testers; a standard abrasion cylinder; besides smaller apparatus for testing cement, lubricating oils, and extension and deflection of materials.

The mechanical and steam laboratories contain small steam and gas engines, a compound air compressor with electric and mechanical control, Westinghouse air brake apparatus, rotary air motors, a hot air engine, a small vertical steam boiler, a direct steam driven ventilating fan, dynamometers, friction brakes, condensers, injectors and ejectors, steam and gas engine indicators, revolution counters, planimeters, anemometers and apparatus for testing pressure gauges, indicator springs, thermometers, flow of steam and air through nozzles, etc. This is supplemented by the power plant equipment previously described, which affords facilities for steam and gas engine trials and boiler tests with larger units, and also provides facilities for various lines of experimental investigation.

The electrical laboratory is provided with a number of small compound-shunt and series-wound direct-current generators and motors, ranging from 2½ to 20-kilowatt; two and three-phase alternating current generators and motors of frequencies from 20 to 133 cycles, and capacities ranging from 2 to 20-kilowatt; rotary converter and motor generator; an 8-horse-power variable speed Stow motor, driving a 5-kilowatt, 2-phase, 220-volt, 10 pole, alternator, which may give any frequency from 40 to 133 cycles; a 3-horse-power inter-pole motor; a 3-horse-power Thompson-Ryan variable speed motor, which, driving a small alternator, affords frequencies from 15 to 60 cycles; a 5-horse-power Lamme series single-phase motor; a 3-horse-power self-starting, Century, single-phase induction motor; a 5-horse-power General Electric, single-phase motor; a 10-horse-power Stanley 2-phase induction motor, equipped with compensator, condensers, and transformers; various types of Cutler-Hammer and other speed regulating and controlling apparatus; static, auto and constant-current transformers; a welding transformer; a high potential transformer for testing insulation, etc.;

a Thodarson set of experimental apparatus for demonstrating any of the principles of electricity; a Queen & Co.'s testing set, with standards of capacity, induction and resistance, and with a potentiometer and standard cell, for standardizing electrical instruments; a General Electric oscillograph with accessories; standard and commercial indicating and recording measuring instruments; synchronism and power-factor indicators; dynamometers; permeameters; galvanometers; tachometers and speed counters; rheostats of various types and capacities; and six distributing panels of switchboard. The photometric and the storage battery equipments of the department of physics are also available in connection with the above. This is also supplemented by the larger generating and controlling units in the power plant.

The hydraulic laboratory equipment consists of a compound duplex steam pump supplying water to a closed steel pressure tank, from which run headers arranged for the insertion of orifices, nozzles, and pipes supplying the various hydraulic motors; concrete storage tanks; measuring tanks and weighing scales; Cascade water wheel, Venturi meter, water meters, steel weir-box, weir-gauges, and other minor measuring and controlling apparatus.

The passenger locomotive donated by the Baltimore & Ohio Railroad Company furnishes a nucleus for instruction in railway engineering.

The Ingersoll-Rand and Sullivan Machinery Companies have each recently furnished the department of mining engineering with a compressed air mining machine and also with a rock drill and tripod mounting, complete.

The Jeffrey Manufacturing Company has also furnished the department with a complete electric chain coal cutting machine and an electric rotary drill with truck and mountings, and tools, and an assortment of lantern slides illustrating the various phases of the uses and the manufacture of mining machinery.

Transits, levels, compasses, etc., are provided for the use of students in land and mine surveying and in highway and railway construction.

The latest trade literature, catalogues, and reports of commercial developments in engineering are kept in classified files for students' reference. The University library has a thoroughly classified and indexed collection of the standard and latest books in engineering and the allied sciences, complete bound sets of the transactions of several scientific and engineering societies, and current issues and bound volumes of the principal scientific and technical periodicals.

METHODS OF INSTRUCTION

In the class-room, instruction is given by lectures, combined with text-book study and recitation. Engineering problems and subjects are assigned to be worked out in the library or drawing-room, in the field, the shop, or the laboratory. Visits of inspection to industrial establishments and power plants are made whenever it is possible to arrange for them.

The method of instruction in manual training and the mechanic arts is to assign in the beginning a few carefully selected exercises by which the student is familiarized with the fundamental operations of constructive mechanics. Later, such instruction is combined with the work of constructing machine elements, tools, and apparatus.

In engineering drawing and designing, the work is carried along with the study of actual typical details of structural elements or with related practical and experimental work in the laboratories and mechanical shops. Frequent reference is made to models, to blue prints of engineering structures, and to existing work in the institution or elsewhere. An opportunity is also afforded for the necessary graphical treatment of engineering problems arising in lectures and the class-room instruction.

In experimental engineering, the students are required to make scientific observations, keep records of tests, facilitate deductions therefrom by the use of calculating instruments, tabulate and plot results, and make reports upon the test in due form. Each member of the class is required to use and to become familiar with all the instruments and apparatus of any given course. The classes are divided into groups of two or three students and furnished with mimeographed notes and forms.

Lectures, field practice, mimeographed notes, collateral reading, conference work, and sketching, accompany all the practical lines of work.

FACILITIES FOR PRACTICAL WORK

The University is located in a region which affords the student unusual opportunities for practical observation and education in engineering. Morgantown is situated practically at the edge of three extensive coal regions; the Fairmont, the Deckers' Creek and the Connellsville fields. The nearest large workings in the Pittsburg coal seam are within a mile of the University and the nearest in the Upper Freeport vein are only four miles away. Connellsville is only forty-five miles distant from Morgantown, and Pittsburg, the

center of the world's greatest iron and steel industries is 103 miles distant.

West Virginia's gas and oil districts approach within four miles of Morgantown and supply fuel for numerous factories. There are two brick works in the city, making building and paving brick from the local clay and shale; and twelve glass factories in the vicinity, producing pressed, plate, and cut glass, window glass, and bottle glass from the adjoining sandstone beds. At Mannheim is a large portland cement mill and another is being erected in the Decker's Creek Valley.

ENGINEERING SOCIETY

The Engineering Society is organized in connection with the Engineering departments. It is conducted by the students of these departments, and meets once in two weeks. Its object is the investigation and discussion of scientific subjects. All engineering students are requested to join this organization and perform such work as its rules require. Students taking any of the four-year courses leading to the baccalaureate degrees in engineering are expected to engage actively for three years in the work of the society.

ENGINEERING COURSES OFFERED IN THIS COLLEGE

REGULAR UNDERGRADUATE COURSES

1. A four-year course leading to the degree of Bachelor of Science in Civil Engineering.

2. A four-year course leading to the degree of Bachelor of Science in Mechanical Engineering.

3. A four-year course in electrical engineering leading to the degree of Bachelor of Science in Mechanical Engineering.

4. A four-year course leading to the degree of Bachelor of Science in Engineering of Mines.

GRADUATE COURSES

1. A course leading to the degree of Civil Engineer.
2. A course leading to the degree of Mechanical Engineer.
3. A course leading to the degree of Electrical Engineer.
4. A course leading to the degree of Engineer of Mines.

SPECIAL COURSES

1. Groups of elective courses for students in other colleges taking work in engineering subjects.
2. Special courses in civil, mechanical, electrical, and mining engineering, for students who do not desire an engineering degree.
3. Special courses in manual training for teachers.
4. Special courses in the mechanic arts for artisans, mechanics, apprentices, stationary engineers, electricians, etc.

NOTE:—The purpose of the undergraduate engineering courses is to give the student a broad foundation for his professional career. Only a limited amount of specialization is considered wise. The study of English and other modern languages, the leading sciences, and especially mathematics and mechanics, prepares the student for the technical subjects of the course. In the latter subjects instruction in the theoretical principles involved is supplemented by field practice or work in the laboratory, shop, and drafting room. The work for a degree is nearly all prescribed, but candidates have an opportunity for a limited amount of specialization before graduation. For full particulars see statements of requirements for each degree.

REQUIREMENTS FOR ADMISSION TO ENGINEERING COURSES

ADMISSION TO REGULAR COURSES

The subjects and number of units in each required for admission to the regular four-year engineering courses are as follows:

English	3
Modern languages	2

Algebra	1½
Plane and solid geometry	1½
Physics with laboratory	1
Chemistry with laboratory	1
History	1
Free hand drawing	1
*Elective	2
Total	14

The following substitutions may be made:

1. One unit in ancient language for one unit in modern language.

2. College work in French, German, geology, mechanic arts, or mechanical drawing which is prescribed work for an engineering degree may be offered for entrance instead of an equivalent amount of preparatory work in physics, chemistry, free-hand drawing, or modern language. In such case the preparatory work for which substitution is made must be taken as college work in the freshman year.

3. Solid geometry may be taken as college work when trigonometry has been offered for entrance.

For a detailed statement of the above units, see page 37.

ADMISSION TO SPECIAL COURSES

Students desiring to take special courses in the College of Engineering and Mechanic Arts are required to conform to the general regulations of the University regarding special students. (See page 35.) Such students must give satisfactory evidence that they are prepared to take the desired studies advantageously; but if they subsequently desire to become candidates for a dgree, or to take a regular course in engineering, they must pass the required entrance examination for that year.

CREDIT FOR WORK DONE IN ABSENCE

Students of the College of Engineering are permitted to apply for advanced standing for not more than two courses for practical work done in the field, shops, or drafting room in the following subjects during vacation or other periods of absence from the University:

*For mining engineering one of the electives must be botany, zoology or biology.

Civil Engineering

Subject	Course credit
Drawing 1, 9, 10, and 11	4
Thesis 21	1

Mechanical Engineering

Woodworking 1 and 3	1 1-5
Foundry 7	2-5
Forging 5	2-5
Tinsmithing and pipe fitting 9	2-5
Machine shop 10 to 13	1 3-5
Machine construction 14 and 15	4-5
Electrical construction 17 and 18	4-5
Mechanical drawing 20 to 23	1 3-5
Machine drawing 30	2-5

Mining Engineering

Mine visits 1	2-5
Mine surveying 2	2-5
Mine laboratory	2-5

Cards for examinations in the above courses will be issued by the chairman of the committee on classification and grades without further action by the committee, provided that the application for the advanced standing card shall be made before the work is done, or within one week after the student's return to the University from vacation or other absence, if before such absence, he did not know that he would have an opportunity to do the work.

THESES

Every candidate for a baccalaureate or graduate degree in engineering will be required to prepare a thesis on some subject relating to a special branch of engineering or other department of applied science. The thesis must be either a design or a review of some machine, structure, or process, belonging to some department of scientific investigation. It must be fully elaborated and accompanied by the necessary working drawings or models required for the proper elucidation of the subject of the thesis. With its

accompanying drawings it will be presented for approval, first to the instructor under whose guidance it has been prepared, then to the head of the department in which the degree is to be conferred. A typewritten copy of the thesis, prepared according to official specifications for theses, and signed by the instructor in charge and the head of the department, must be placed in the University library before graduation.

The credit value of the thesis is one course.

UNDERGRADUATE COURSE IN CIVIL ENGINEERING

This is a four-year course leading to the degree of Bachelor of Science in Civil Engineering. It has been planned with a view to laying a broad and substantial foundaton for the general and technical knowledge needed by practitioners in civil engineering.

Requirements for the degree of Bachelor of Science in Civil Engineering:

Subject	*Course numbers*	*Course credits*
Mathematics:—		
Trigonometry	9	1
Higher algebra	8	1
Analytic geometry	11	1
Differential calculus	15	1
Integral calculus	16	1
Language:—		
German, French or Spanish		3
Chemistry:—		
Analytic chemistry	4, 5, 7	1
Geology:—		
General geology	2	1
Economic geology	4	1
Mineralogy	6	1
Physics:—		
General physics	6, 7, 8	3
Applied electricity	14	1

Mechanics and applied mathematics:—			
Statics	2	1	
Kinetics	3	1	
Strength of materials	4	1	
Power	5, 6	2	
Mechanical engineering:—			
Woodworking	1	1	
Testing laboratory	70, 71, 72	1	
Civil engineering:			
Drawing	1, 9, 10, 11	4	
Descriptive geometry	2, 3	2	
Land surveying	4	1	
Railroad surveying	5	1	
Topographical surveying	6	1	
Railroad construction	7	1	
Roads, streets, and pavements	8	1	
Hydraulics	12	1	
Stereotomy	13	1	
Stresses in roofs and bridges	14, 15	2	
Bridge design	16	1	
Municipal and sanitary engineering	17		3-5
Economic railroad location	18	1	
Masonry construction	19	1	
General engineering construction	20	1	
Thesis	21	1	
Contracts and specifications	23		2-5
Total		44	

Students who wish to specialize along the lines of chemistry, physics, mining engineering, hydraulics, structural design or electrical engineering, will be allowed to do so, under the following conditions: no substitution or election will be allowed before the beginning of the third year; any student desiring so to specialize must prepare a list of the studies he wishes to substitute or elect, and a scheme of the work proposed, which must be approved by the head of the department and the committee on classification and grades, and filed with the registrar.

DISTRIBUTION OF THE WORK FOR THE DEGREE OF B.S.C.E.

Each subject is followed by its department number and, if a fractional course, by its credit value.

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	German 4 (See Note 1)	German 5	German 6
9:30	Proj. Drawing 1	Drawing 9	Land Surveying 4
10:30	Univ. Algebra 8	Trigonometry 9	Anal. Geometry 11
11:30	Geology 2		Geology 4
1:30	Woodworking 1, 1-3	Woodworking 1, 1-3	Woodworking 1, 1-3

Second Year

8:30	Diff. Calculus 15	Int. Calculus 16	Mechanics 2
9:30	Physics 6	Physics 7	Physics 8
10:30			Top. Sur. 6, M., W., and F.
11:30	Descrip. Geom. 2	Descrip. Geom. 3	
1:30	Anal. Chem. 4, 1-3 Tu. and Th.	Anal. Chem. 5,1-3 Tu. and Th.	Anal. Chem. 7, 1-3 Tu. and Th. Surveying 6, W. and F.
2:00	Draw. 10, 1-2	Draw. 10, 1-2	

Physics 6, 7, 8 Laboratory days and hours arranged

Third Year

8:30	R. R. Surveying 5	R. R. Construction 7	Masonry Const. 19
9:30	Mechanics 3	Mechanics 4	Mineralogy 6
10:30	Stereotomy 13		Rds. & Pavements 8
11:30		Physics 14	
2:00	Draw. 11, 1-2 M., W., and F.	Draw. 11, 1-2 M., W., and F.	
Sat.	Mech Lab. 70, 1-3	Power Meas. 71, 1-3	Testing Mat. 72, 1-3

Fourth Year

8:30	Power 5	Power 6	Econ. R. R. Loc. 18
9:30			Eng. Const. 20
10:30	Roofs and Bridges 14	Roofs & Bridges 15	
11:30	Mun. and San. Eng. 17 Contract & Spec. 23	Bridge Design 16	Hydraulics 12 (See note 2)
2:00		Bridge Design 16	

Thesis throughout the year.

NOTE 1:—Students are expected to take three courses of French, German, or Spanish as college work. The three taken may be any for which they are prepared. Those who enter with credit for three courses of German may take second-year German as scheduled above. Others may take their language work as they can arrange it.

NOTE 2:—Students who expect to take their thesis subject in hydraulics should take Hydraulics 12 in the third year instead of the fourth, as scheduled.

UNDERGRADUATE COURSE IN MECHANICAL AND ELECTRICAL ENGINEERING

The following four-year courses leading to the degree of Bachelor of Science in Mechanical Engineering are offered:

1. **Mechanical Engineering.** For the benefit of those wishing to specialize in machine design, machinery and mill work, or other mechanical engineering subjects, an optional or alternative course for the fourth year is provided.

2. **Electrical Engineering.** The first two years of both the mechanical and electrical courses are the same, the differentiation beginning in the winter term of the third year.

Both of these courses have much in common, and in accordance with the custom of leading engineering schools, no distinction is made in the degree which is given. Any graduate who so desires may receive, in addition to his degree, a certified statement of the course which he pursued.

These courses are planned to prepare the student for intelligent work involving the design, selection, cost, construction, installation, testing and management of power generators, prime movers, and machinery for manufacturing, transportation and power transmission; the planning, equipment, cost, construction, and management of manufacturing plants, shops and factories; lighting, heating and ventilating.

The degree of Bachelor of Science in Mechanical Engineering will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes the following thirty-six required college courses, and eight courses selected from one of the elective groups given below:—

REQUIRED COURSES

Subject	Course numbers	Course credits
Language:—		
French, German, or Spanish		3
Mathematics:—		
Trigonometry	9	1
Advanced algebra	8	1
Analytic geometry	11	1
Differential calculus	15	1
Integral calculus	16	1
Chemistry:—		
Analytic chemistry	4, 5, 7	1
Geology:—		
General geology	2	1
Physics:—		
General physics	6, 7, 8	3
Mechanics and applied mathematics:—		
Development and utilization of power	5, 6	2 } 5
Analytic mechanics	2, 3	2
Strength of materials	4	1
Civil engineering:—		
Descriptive geometry	2	1 } 2
Land surveying	4	1
Mechanical engineering:—		
Mechanic arts:		
Woodworking	1, 3	1 1-5 } 5
Foundry	7	3-5
Forging	5	2-5
Tin smithing and pipe fitting	9	2-5
Machine shop	10, 11, 12, 13	1 3-5
Machine construction or Electrical construction	14, 15 / 17, 18	4-5

Mechanical drawing and machine design:			
Mechanical drawing	20, 21, 22	1 1-5	5 3-5
Mechanism and machinery	24, 26	1 1-5	
Mechanism (drawing)	25, 27	4-5	
Valves and valve gears	28	3-5	
Valve gears (drawing)	29	2-5	
Machine drawing	30, 32	4-5	
Machine design	31	3-5	
Steam engineering:—			
Thermodynamics	40	1	2 1-5
Heat engines and motors	41	3-5	
Power plant design	43	3-5	
Experimental engineering:—			
Mechanical laboratory	70	1-3	2 1-5
Power measurement	71	1-3	
Testing materials	72	1-3	
Mechanical engineering: Laboratory	73, 74, 75	1 1-5	
Thesis			1
Total			36

GROUPS OF ELECTIVE COURSES

Mechanical—Regular

Subject	*Course numbers*	*Course Credits*
Mechanical engineering:—		
Steam engine design	34	3-5
Steam boilers	42	3-5
Drawing and designing	35, 36, 37	1 4-5
Civil engineering:—		
Hydraulics	12	4-5
Electrical engineering:—		
Electrical distribution	55	3-5
Power transmission	54	3-5
Electric lighting and railways	56	3-5
Electrical laboratory	60, 61	4-5

Physics:—

Applied electricity	11, 12	1 3-5
Total		8

Mechanical—Alternative

Mechanical engineering:—		
*Steam engine design	34	3-5
*Steam boilers	42	3-5
Materials of engineering	47	1
Heating and ventilating	46	1
*Machine design	33	1
Machinery and mill work	45	1
*Drawing and designing	35, 36, 37	1 4-5
Electrical engineering:—		
*Electrical engineering	66	3-5
Civil engineering:—		
Hydraulics	12	1
Any other approved course		1 or more
Mechanics and applied mathematics:—		
Any approved course		1 or more
Physics:—		
*Applied electricity	11, 12	1 3-5
Mining engineering:—		
Machinery and haulage	4	3-5
Metallurgy	10, 11	4-5
Total to be selected		8

*Students selecting their elective coures from this group will be required to take the courses marked with an asterisk, unless equivalent substitutions are made with the approval of the head of the department and the committee on classification and grades.

Electrical

Electrical engineering:—		
Electrical machinery	51, 52, 53	1 3-5

Electrical distribution	55	3-5
Electric lighting and railways	56	3-5
Power transmission	54	3-5
Electric. engineer. laboratory	60,61,62	1 1-5
Designing and drawing	57, 58, 59	1 4-5
Physics:—		
Applied electricity	11, 12	1 3-5
Total		8

Students who wish to specialize in telephone engineering will be permitted to substitute Telephone Engineering 65 for Electric Lighting and Railways 56.

DISTRIBUTION OF THE WORK FOR THE DEGREE B.S.M.E.

Each subject is followed by its department number and, if a fractional course, by its credit value.

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	German 4	German 5	German 6
9:30			Land Surveying 4
10:30	Algebra 8	Trigonometry 9	Anal. Geom. 11
11:30	Geology 2		
1:00	Mech. Draw. 20 2-5 W. and F.	Mech. Drawing 21, 2-5 W. and F.	Mech. Drawing 22 2-5 W. and F.
1:00	Woodwk'g 1, 3-5 T., Th., and 8:00 S.	Pattern-making 3, 3-5 Tu., Th., and S.	Foundry 7, 3-5 Tu., Th., and S.

Second Year

8:30	Differential Calculus 15	Integral Calc'us 16	Mechanics 2
9:30	Physics 6	Physics 7	Physics 8
10:30		Mechanism 24, 3-5 M., W., and F.	Mechanism 26, 3-5 M., W., and F.
11:30	Descriptive Geom. 2		
1:30	Anal. Chem. 4, 1-3 Tu. and Th.	Anal. Chemistry 5, 1-3 Tu. and Th.	Anal. Chem. 7, 1-3 Tu. and Th.
1:00	Mech. Draw. 23, 1-3 F. (elective)	Mechanism 25, 2-5 W. and F.	Mechanism 27, 2- W. and F.
1:00	Forging 5, 2-5 M. and 8:00 S.	Tin & Pipe Work 9, 2-5 M and S.	Machine Work 10 2-5 M. and S.

Third Year (Mechanical)

8:30	Power 5	Power 6	Thermodynamics 40
9:30	Mechanics 3	Mechanics 4	Mach. Design 31, 3-5 M., W., & F.
10:30	Valves and Valve Gr's 28 M., W., and F.	Physics 11, 3-5 M., W., and F.	Physics 12
11:30			
1:30	Mach. Work 11, 2-5 M. and F.	Machine Work 12, 2-5 M. and F.	Mach. Work 13 2-5 M and F.
1:00	Valve Gears 29 2-5 Tu. and Th.	Machine Draw'g 30, 2-5 Tu. and Th.	Mach. Drawing 32, 2-5 Tu. and Th.
8:00	Mech. Lab. 70, 1-3 S.	Power Measure 71, 1-3 S.	Testing Mater. 72, 1-3 S.

Fourth Year (Mechanical)

8:30	Heat Engines 41, 3-5 M., W., & F. Engineering Lab. 73, 2-5 Tu. or Th. Elect. Lab. 60, 2-5 Tu. or Th.	Power Plt. Des. 43, 3-5 M., W., & F. Eng'g Lab. 74 2-5 Tu. or Th. Elect. Lab. 61, 2-5 Tu. or Th.	Hydraulics 12, 4-5 Eng'g Lab. 75, 2-5, Tu. or Th.
9:30	Steam Eng. Des. 34, 3-5 M., W., & F.	Steam Boilers 42, 3-5 M., W., & F.	Elect. Light'g 56, 3-5 M., W., & F.
10:30	Elect Trans. 54 3-5 M., W., & F.	Elect. Dist. 55, M., W., and F.	Thesis Conference, M., W., and F.
1:00	Draw. and Des. 35, 3-5 Tu., Th., and F. Mach. Const. 14. 2-5 M. and W.	Draw. and Des. 36, 3-5 Tu., Th., & F. Mach. Const. 15, 2-5 M. and W.	Draw. and Des. 37, 3-5 Tu., Th., & F.

Fourth Year (Mechanical Alternative)

Candidates for the degree of B. S. M. E. may select their elective studies from the mechanical alternative group of electives, but such elective courses must be taken at the time for which they are announced in the catalogue. The required courses must be taken as scheduled above.

Third Year (Electrical)

8:30	Power 5	Power 6	Thermodynamics 40
9:30	Mechanics 3	Mechanics 4	Mach. Design 31, 3-5 M., W., & F.
10:30	Valves & Valve Gr's 28,3-5 M., W., & F.	Ap'd Electricity 11, 3-5 M., W., & F.	Ap'd Electricity 12
11:30			
1:00	Mach. Work 11, 2-5 M. and F.	Mach. Work 12, 2-5 M. and F.	Mach. Work 13, 2-5 M. and F.
1:00	Valve Gears 29 2-5 Tu. and Th.	Mach. Draw'g 30, 2-5 Tu. and Th.	Mach. Drawing 32, 2-5 Tu. and Th.
8:00	Mech. Lab. 70, 1-3 S.	Power Measure 71, 1-3 S.	Testing Mater. 72, 1-3 S.

Fourth Year (Electrical)

8:30	Heat Engs. 41, 3-5 M., W., and F.	Power Plant Des. 43 3-5 M., W., and F.	Thesis Conference M. W., and F.
	Eng'g Lab. 73, 2-5 Tu. or Th.	Eng'g Lab. 74, 2-5 Tu. or Th.	Eng'g Lab. 75, 2-5 Tu. or Th.
	Elect. Lab. 60, 2-5 Tu. or Th.	Elect Lab. 61, 2-5 Tu. or Th.	Elect. Lab. 62, 2-5 Tu. or Th.
9:30	Elect. Mach'y 51, 3-5 M., W., and F.	Elect. Mach. 52, 3-5 M., W., and F.	Elect. Light'g 56, 3-5 M., W., & F.
10:30	Elect. Trans. 54, 3-5 M., W., and F.	Elect. Dist. 55, 3-5 M., W., & F.	Elect. Mach. 53, 2-5 W. and F.
1:00	Des. and Draw. 57, 3-5 Tu., Th., and F.	Des. & Draw. 58, 3-5 Tu., Th. & F.	Des. & Draw. 59, Tu., Th. & F.
	Elect. Const. 17, 2-5 M. and W.	Elect. Const. 18, 2-5 M. and W.	

UNDERGRADUATE COURSE IN MINING ENGINEERING

This is a four-year course leading to the degree of Bachelor of Science in Engineering of Mines.

The object of the course is to prepare young men to take responsible positions in connection with the mining development of the state. The exact requirements for the degree will be modified from time to time to suit conditions.

The degree of Bachelor of Science in Engineering of Mines will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes the following forty-four courses:

Subject	*Course numbers*	*Course Credits*
Languages:—		
French, German or Spanish		3
Mathematics:—		
Trigonometry	9	1
Advanced algebra	8	1
Analytic geometry	11	1
Differential calculus	15	1
Integral calculus	16	1
Chemistry:—		
Analytic chemistry	4, 5, 7, 10	1 1-2
Physiology:—		
Physiology (First Aid)	2	1-5
Geology:—		
General geology	2	1
Paleontology	3	1
Mineralogy	6, 7	2
Physics:—		
General physics	6, 7, 8	3
Applied electricity	11, 16	1
Mechanics and applied mathematics:—		
Analytic mechanics	2, 3	2
Strength of materials	4	1
Civil engineering:—		
Drawing	10, 11	2
Descriptive geometry	2	1
Land, railroad and topographic surveying	4, 5, 6	3
Masonry construction	19	1
Roofs and bridges	14	1
Hydraulics	12	4-5
Mechanical engineering:—		
Mechanical drawing	20, 21, 22	1 1-5
Woodworking	1	2-5
Forging, tinsmithing	6, 9	4-5
Machine work, Foundry	10, 7	4-5

Mechanical laboratory	70, 71, 72, 73	1 2-5
Thermodynamics	40	1
Mechanism	24	3-5
Heat engines	41	3-5
Power plant design	36, 43	9-10
Electrical engineering	66	2 3-5

Mining engineering:—

Mine visits	1	2-5
Mine surveying	2	2-5
Mining	3, 4, 5	1 4-5
Mine design	6	2-5
Mine laboratory	7	2-5
Mine law	8	1-4
Ore dressing	9	2-5
Metallurgy	10, 11	4-5
Mine operation	12	2-5
Thesis		1
Total		44

A student wishing to specialize in geology, mineralogy, chemistry, or some special engineering subject, may with the consent of his class officer and the committee on classification and grades, substitute an equivalent number of courses in one or more of these subjects for certain courses of the above list

DISTRIBUTION OF THE WORK FOR THE DEGREE OF B.S.E.M.

Each subject is followed by the department number, and the credit value of fractional courses is given.

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	French 1*	French 2*	French 3*
9:30		Chemistry 2*	Land surveying 4
10 30	Algebra 8	Trigonometry 9	Anal. Geom. 11
11:30	Chemistry 1*	Physiology 2, 1-5	Chemistry 3*
1:30	Mech. Draw. 20, 2-5 W. and F	Mech. Draw. 21, 2-5 W. and F.	Mech. Draw. 22, 2-5 W. and F.
	Woodworking 1, 2-5 Tu. and Th.	Mach. Work 10, 2-5 Tu. and Th.	
	Forging 6, 2-5 M., and 8:00 S.	Tinsmith 9, 2-5 M. and 8:00 S.	Foundry 7, 2-5 Th. and 8:00 S.

*The course not presented for admission, is required.

Second Year

8:30	Diff. calculus 15	Int. calculus 16	Mechanics 2
9:30	Physics 6	Physics 7	Physics 8
10 30		Mechanism 24 3-5 M., W., and F.	Topog. Surv. 6 M., W., and F.
11:30	Geology 2		
1:30	Anal. Chem. 4, 1-3 Tu. and Th. Drawing 10, 1-2	Anal. Chem. 5, 1-3 Tu. and Th. Drawing 10, 1-2	Anal. Chem. 7, 1-3 Tu. and Th. Mine visits 1, 2-5

*The course not presented for admission, is required.

Third Year

8:30	R. R. surveying 5	Geology 3	Thermodynamics 40
9:30	Mechanics 3	Mechanics 4	Mineralogy 6
10:30			
11:30	Des. Geom. 2	Physics 14	Hydraulics 12, 4-5
1:30	Drawing 11, 1-2 M., W. and F.	Drawing 11, 1-2 M., W. and F.	Mine surveying 2, 2-5 W. and F.
8:00	S. Mech. Lab. 70, 1-3	Power Meas. 71, 1-3	Testing Mater. 72, 1-3

Fourth Year.

8:30	Heat engines 41, 3-5 M., W. and F.	Power plant 43, 3-5 M., W. and F. Metallurgy 10, 2-5 Tu. and Th.	Masonry const. 19
9:30	Mining 3, 3-5 M., W. and F. Ore dressing 9, 2-5 Tu. and Th.	Mining 4, 3-5 M., W. and F. Mine oper. 12, 2-5 Tu. and Th.	Mining 5, 3-5 M. W., and F. Mine design 6, 2-5 Tu. and Th.
10:30	Roofs and bridges, 14	Power plant 36, 3-10	
11:30		Mineralogy, 7	Elect. Eng. 66, 3-5 M., W. and F. Metallurgy 11, 2-5 Tu. and Th.
1:30	Anal. Chem. 10, 1-2 Tu. and Th. Mine law 8, 1-5 M.	Mine Lab. 7, 2-5	Thesis
8:00	S. Mech. Lab. 73, 1-5		

GRADUATE COURSES IN ENGINEERING

These lead to the professional degrees of Civil Engineer, Mechanical Engineer, Electrical Engineer, and Engineer of Mines, respectively. They consist of eight advanced engineering courses and a thesis, and require one year of resident study and work at the University.

A candidate for a professional degree is required to have completed the prescribed four-year course of undergraduate study in that department of this college in which he proposes to take a degree, or to have completed such a course or its equivalent at some other institution of recognized standing, conferring the same or an equivalent baccalaureate degree. In the latter case, the diploma and other certificates of proficiency should be presented.

There is no fixed curriculum of subjects for any of these degrees, but the course of study or investigation is arranged to suit the needs of each candidate, subject to the rules governing candidates for the degree of Master of Arts as stated in the announcement of the College of Arts and Sciences. Each candidate for a degree must select his major subject in the department in which his degree is to be taken and submit a thesis showing marked attainment in some phase of this subject.

SPECIAL ENGINEERING COURSES

1. Elective Groups for Students in other Colleges. Candidates for other than the engineering degrees, and special students in any department of the University, are permitted to elect subjects in the College of Engineering, provided, in each case, they have had the subjects specified as prerequisites. Students who wish to take a general classical or scientific course before taking an engineering course are advised to carry their mathematics as far as called for by the engineering course, and to take some of their elective work in the College of Engineering. The engineering instructors will advise them what is best to elect.

Credits are given in the College of Arts and Sciences for the following engineering courses:

	Course Credits.
Mechanics and applied mathematics:—	
Courses 2, 3, 4, 5, 10, 11, 12	7
Civil engineering:—	
Hydraulics 12	1
Descriptive geometry 2 and 3	2

Stereotomy 13 1
Land surveying 4 1
Drawing (C.E. or M.E.) 2

Mechanical and electrical engineering:—
Thermodynamics 40 1
Electrical machinery 51, 52, 53 2
Electrical laboratory 60 and 61 1
Mechanical laboratory 70, 71, 72 1
Heating and ventilating 46 1
Mechanical drawing (C.E. or M.E.) 2

In addition to the above a student may elect, with consent of his major instructor,

1. When his major subject is physics:—
Mechanic arts 1-18 3
Mechanical drawing (M.E. or C.E.) 1

2. When his major subject is in education:—
Mechanic arts 1-18 3
Mechanical drawing (M.E. or C.E.) 2

2. Partial Courses. Deserving young men who have not the time or are otherwise unable to take a full course, will be allowed to take special or partial courses, consisting of such studies as they are prepared to take, provided that such partial courses shall have been approved by their class officers. For further information see statement of requirements for admission to special courses.

3. Manual Training Courses. The first group consists of courses 1, 2, 3, and 5 in mechanical engineering. The second group consists of mechanical drawing, courses 20, 21, 22, and shop practice in wood and metal working courses 1, 2, 3, 5, 7, 8, 9, and 10. These courses aim to present the simple elements of some of the constructive arts which admit of being developed into a logical series of exercises. Their merit is chiefly educational, rather than as possessing any intrinsic value in relation to the several branches of handicraft work from which they are taken. The primary object is the training of the eye to see the form of objects, and of the hand to produce such forms in the materials most commonly used in constructive work. There is sufficient instruction in handicraft work and practice to form a proper foundation for the more advanced work with machine tools in mechanical construction and these courses are therefore required of all students taking the full course in mechanical engineering.

4. **Special Courses for Mechanics, etc.** Students who wish to become more proficient in the use of tools or who are preparing themselves for positions as foremen in industrial establishments, may take additional work in the shop in which they wish to specialize. Instruction will be given in the maintenance and repair of machinery, and opportunity will be afforded for the construction of new machines and apparatus for the University, as well as the working up in the shops of original designs which have been approved by the head of the department. All students in mechanical engineering are recommended to take advantage of this provision and devote as much time as possible to shops and drawing-room practice.

DEPARTMENTS OF INSTRUCTION

Each of the courses of instruction offered by the College of Engineering is known as a full course unless otherwise stated; that is, a course of five class exercises a week for one quarter, or their equivalent in laboratory or other practical work.

The following branches of applied science and engineering are represented in the courses offered by the Engineering departments:

Applied mathematics
Civil engineering
Designing
Drawing
Electrical engineering
Experimental engineering
Hydraulic engineering
Mechanics
Mechanic arts
Mechanical engineering
Metallurgy
Mining engineering
Municipal engineering
Railroad engineering
Sanitary engineering
Steam engineering
Structural engineering
Surveying

CIVIL ENGINEERING

Professor BOUGHTON and Professor MORRIS

1. **Projection Drawing.** Orthographic projections in one quadrant; elementary problems in shades and shadows; isometric and oblique projections. Lectures and recitations; drawing-room work. Fall, 9:30; Professor MORRIS, 30 M. H.

2. **Descriptive Geometry.** Orthographic projections in the four quadrants; problems of the point, line, and plane; tangencies and the development of single-curved surfaces.
Fall, 11:30; Professor MORRIS, 24 M. H.

3. **Descriptive Geometry.** Single-curved, double-curved and warped surfaces; intersections, tangencies and developments; shades, shadows and perspective. Lectures and recitations.
Winter, 11:30; Professor MORRIS, 24 M. H.

4. **Land Surveying.** Theory and practice of land surveying; magnetic variations; calculating the content; retracing old lines; division of lands; establishment of meridians; care and use of instruments; mapping the survey. Lectures, recitations, and field practice. Gillespie's Surveying.
Spring, 9:30; Professor MORRIS, 24 M. H.

5. **Railroad Surveying.** Theory and practice of railroad surveying. Lectures, recitations, and field work. Searles' Field Engineering. Fall, 8:30; Professor MORRIS, 24 M. H.

6. **Topographical Surveying.** Theory and practice of topographic, hydrographic, and barometric surveying. Lectures, recitations, and field practice. Prerequisite, course 4. Johnson's Theory and Practice of Surveying.
Spring, 10:30; Professor BOUGHTON, 14 M. H.

7. **Railroad Construction and Maintenance.** Tunnels, trestles, track-work, earth-work, signalling, graduation, masonry, etc. Tratman's Track and Track-work.
Winter, 8:30; Professor MORRIS, 24 M. H.

8. **Roads and Pavements.** Location, construction, and maintenance; study and comparison of the various types of roads; road-making materials. Lectures, recitations, and field work.
Spring, 10:30; Professor MORRIS, 24 M. H.

9. **Drawing.** Continuation of course 1; projections, developments, and intersections; lettering. Thorne's Junior and Intermediate Courses in Drawing.
Winter, 9:30; Professor MORRIS, 30 M. H.

10. **Drawing.** Conventional methods in detail drawing and map drawing; special attention to execution and to practical lettering of working drawings. One-half course given in the fall and one-half in the winter. 2:00; Professor BOUGHTON, 30 M. H.

11. **Drawing.** Continuation of course 10; examples taken from actual engineering constructions; elementary problems in de-

sign of structures. One-half course given in the fall and one-half in the winter. 2:00; Professor BOUGHTON, 30 M. H.

12. Hydraulics. Theoretic pressure and energy of water; flow of water through orifices and tubes and over weirs; flow in conduits, pipes, canals, and rivers; current meters, water motors, etc. Lectures and recitations. Arranged either as a full course or a four-fifths course. Spring, 11:30; Professor BOUGHTON, 14 M. H.

13. Stereotomy. Stone-cutting, plain and decorative. Recitation and drawing-room work. Warren's Stone Cutting.
Fall, 10:30; Professor MORRIS, 32 M. H.

14. Stresses in Roofs and Bridges. Determination of stresses by graphical and analytical methods. Lectures and recitations. Prerequisite, Applied Mechanics 4.
Fall, 10:30; Professor BOUGHTON, 14 M. H.

15. Stresses in Bridges and Arches. Continuation of course 14. Lectures and recitations.
Winter, 10:30; Professor BOUGHTON, 14 M. H.

16. Bridge Design. Detailed designs of bridges and other structures of wood and steel. Must be preceded or accompanied by course 15.
Winter, 11:30 and 2:00; Professor BOUGHTON, 30 M. H.

17. Municipal and Sanitary Engineering. Water supply for municipalities, sewerage systems, sewage disposal, etc. Lectures and recitations. Three-fifths course. Accompanies course 23.
Fall, 11:30; Professor BOUGHTON, 14 M. H.

18. Economic Railroad Location. General theory of railroad location; effects of grades, curvature, and distance on operating expense and revenue; railroad finance and management.
Spring, 8:30; Professor MORRIS, 24 M. H.

19. Masonry Construction. As presented in Baker's Masonry Construction. Spring, 8:30; Professor BOUGHTON, 14 M. H.

20. General Engineering Construction. Supplementary to other courses of this department. Masonry arches; solid and framed domes; built-up timber beams; trussed timber and steel beams; composite beams; reinforced concrete for beams, columns,

retaining walls, arches, dams, etc.; analytical and graphical solution of roof angles and other skew connection work; building superintendence; relative economy of structures of different cost and life. Prerequisite, courses 7, 16, and 19.

Spring, 9:30; Professor BOUGHTON, 14 M. H.

21. Thesis. See general description of engineering courses for thesis requirements.

22. Geodesy. Precise and geodetic surveying; reduction of observations by the method of least squares; field exercises in determining azimuth, latitude, and time. Elective course, not given regularly. Hours to be arranged; Professor BOUGHTON, 14 M. H.

23. Contracts and Specifications. Law of contracts; writing of engineering contracts and specifications; procedure in awarding of contracts; duties of engineer or architect during construction of work under a contract. This course given only in conjunction with course 17. Two-fifths course.

Fall, 11:30; Professor BOUGHTON, 14 M. H.

Advanced courses in hydraulics and bridge design have been given by the head of the department and will be arranged again whenever necessary. Students who desire to specialize in this way must comply with the conditions laid down on a preceding page under the head Undergraduate Course in Civil Engineering.

NOTE:—In the several surveying courses, whether so stated in the announcement or not, there may be field practice on Friday afternoons, or at other times different from the recitation hour, as the instructor may arrange. The student should keep this in mind when selecting courses for any quarter.

MECHANICAL AND ELECTRICAL ENGINEERING AND THE MECHANIC ARTS

Professor JONES, Professor CHURCH, Professor DICKINSON, Mr. GRUMBEIN, Mr. CATHER, and Mr. WEST

Courses in the Mechanic Arts

1. Woodworking. Includes instruction in carpentry, joinery, and other bench work; exercises with the fundamental edge tools in soft and hard woods, and in matching, molding, joining, and making typical framed work; woodturning, comprising the funda-

mental geometric forms in soft and hard woods; fitting forms of reversed curves; face plate work, chucking, boring, finishing, and polishing. Three-fifths course, or nine actual hours per week.

1st section; Fall, Winter, or Spring, Monday, Wednesday, and Friday, 1:00.

2nd section; Fall or Winter, Tuesday and Thursday, 1:00, and Saturday, 8:00. Mr. GRUMBEIN, 21 M. H.

2. Woodworking. Advanced work for special students. In this course the student is permitted to specialize along the lines of his choice. The amount of credit to be given depends upon the amount of time spent in the shop and the progress made by the student. Hours to be arranged; Mr. GRUMBEIN, 21 M. H.

3. Pattern-Making. Applies the foregoing instruction in its relation to patterns for machine construction, considers the types of patterns and usual allowances for draft, shrinkage and finish, with exercises in making patterns of machine elements and other work to be executed in the machine shop. Three-fifths course, or nine hours per week.

Fall, Winter, or Spring, Tuesday and Thursday, 1:00, and Saturday, 8:00; Mr. GRUMBEIN, 21 M. H.

4. Pattern-Making. A continuation of course 3 for special students. Credit for this course is given on the basis of time spent in the shop and the progress of the student.

Hours to be arranged; Mr. GRUMBEIN, 21 M. H.

5. Forging. Exercises in drawing out and sizing, forming, welding, and fitting iron; steel forging, tempering, annealing; making typical tools to be used later in the machine shop; manner of working forges; determining quality of iron and steel and strength of the students' welded joints. Two-fifths course, or six hours per week.

Sophomores; Fall, Monday, 1:00, and Saturday, 8:00; other sections, hours to be arranged; Mr. WEST, 7 M. H.

6. Forging. A continuation of course 5 for special students. Credit is given on the basis of time spent in the shop and the progress of the student. Hours to be arranged; Mr. WEST, 7 M. H.

7. Foundry. Moulding and casting in connection with pat-

tern-making; selection, preparation, and use of moulding, facing, and parting sands; use of typical molder's tools and appliances; making castings from exercise patterns and from those for machine work. Three-fifths course.

Spring, Tuesday and Thursday, 1:00, and Saturday, 8:00; Mr. WEST and Mr. GRUMBEIN, 8 M. H.

8. Foundry Practice. A continuation of course 7 for special students. Hours to be arranged; Mr. WEST, 8 M. H.

9. Tin-Smithing and Pipe-Fitting. Brazing, tinning, forging, and use of coppers; seamless and solder-jointed work in tin and sheet iron; laying-out, cutting, and forming sheet-metal; electrical fitting; bending and coiling pipe; making joints and use of packing; drilling and tapping for pipe and bolt holes in boiler plate; soft and hard patches; tank and boiler riveting, caulking, and tube expanding. Two-fifths course, or six hours per week.

Winter, Monday, 1:00, and Saturday, 8:00; Mr. WEST, 7 M. H.

10. Machine Work. Tool smithing, iron work at the bench, chipping, filing, fitting, scraping, polishing; key-seating; formation of straight edges and surface plates; handwork with machine tools, drilling, tapping. Two-fifths course, or six hours per week.

Spring, Monday, 1:00, and Saturday, 8:00; Mr. CATHER, 11 M. H.

11, 12, 13. Machine Tool Work. A continuation of course 10. Mechanical engineering; machine tool work with drill-press, lathe, shaper, planer, emery grinder, and milling machine; production of typical details of machine tools and other workshop appliances. Each, two-fifths course or six hours per week.

Fall, Winter, and Spring, Tuesday and Thursday, 1:00; Mr. CATHER, 11 M. H.

14, 15, 16. Machine Construction. Reproduction of typical details of steam-engine and other motive-power machinery; work from original designs; manufacture of special apparatus for shop and laboratory use; practice in building, assembling, and erecting workshop and engineering appliances, motive-power machinery and accessories, and attendance on the same. Each, two-fifths course, or six hours per week.

Fall, Winter, and Spring, Tuesday and Thursday, 1:00; Mr. CATHER, 11 M. H.

17, 18. Electrical Construction. Mechanical repairs to dyna-

mos and motors and setting and adjusting brushes; constructing switches, switch boards, and rheostats; winding coils, wiring for electric light, power and telephone service. Each, two-fifths course.

Fall and Winter, Monday and Wednesday, 1:00; Professor DICKINSON and Mr. WEST, 4 M. H.

Courses in Mechanical Drawing and Machine Design

20, 21, 22. Mechanical Drawing. Plain lettering, care and use of drawing instruments, selected geometric constructions, line exercises, finished drawings; isometric, cabinet and orthographic projection, working drawings from models and blue prints, tracing, and blue printing; mimeographed notes, blue prints. Each two-fifths course, or six hours per week.

Fall, Winter, and Spring, Monday, Wednesday, and Friday, 1:00; Professor CHURCH, 25 M. H.

23. Machine Drawing. Working drawings of machine parts from sketches and models. Elective for sophomores. Prerequisite, course 21. One-third course.

Fall, Friday, 1:00; Professor CHURCH, 25 M. H.

24. 26. Mechanism and Machinery. Analysis and classification of mechanisms, diagrams of relative velocities of machine parts; principles of transmission and change of motion by linkages, rolling contact, tooth gearing, couplings, belting, cams, parallel and straight line motions; classification and analysis of machinery with special attention to workshop appliances, machine tools, and machinery of transmission. Lectures and recitations. Prerequisite, course 20, and accompanying drawing courses, 25 and 27. Each, three-fifths course.

Winter and Spring, Monday, Wednesday, and Friday, 10:30; Professor CHURCH, 26 M. H.

25, 27. Mechanism Drawing. Practice accompanying courses 24 and 26. Drawings and diagrams of mechanical movements, graphical solution of problems; design of gear teeth. Each, two-fifths course, or six hours per week.

Winter and Spring, Wednesday and Friday, 1:00; Professor CHURCH, 25 M. H.

28. Valves, Valve Gears, and Governors. Comparison of valve diagrams; analysis and design of valves, valve gears, and gov-

ernors. Prerequisite, Mechanical Engineering 27 and Mechanics 2. Lectures, recitations, and accompanying drawing course 29. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 10:30; Professor CHURCH, 26 M. H.

29. Valves and Valve Gears. Drawing-room practice accompanying course 28.

Fall, Tuesday and Thursday, 1:00; Professor CHURCH, 25 M. H.

30. Machine Drawing. Conventional methods, detail and assembled drawings, tracing and blue printing. Prerequisite, course 22. Two-fifths course.

Winter, Tuesday and Thursday, 1:00; Professor CHURCH, 25 M. H.

31. Machine Design. Elements of machine design, conventional and rational; adaptation of commercial sizes; proportioning fastenings, flanges, bearings, rotating pieces, connecting links, and machine supports; mechanics of machinery; influence of material and treatment on design. Lectures and recitations. Prerequisite, Mechanics 4 and course 26, Mechanical Engineering, and accompanying drawing course 32. Three-fifths course.

Spring, Monday, Wednesday, and Friday, 9:30; Professor CHURCH, 26 M. H.

32. Machine Drawing. Drawing-room practice accompanying course 31. Two-fifths course.

Spring, Tuesday and Thursday, 1:00; Professor CHURCH, 25 M. H.

33. Machine Design. Continuation of course 31. Lectures, recitations, and drawing. Notes, blue prints, and reference works.

Fall, 11:30; Professor CHURCH, 26 M. H.

34. Steam Engine Design. Comparison of rational and empirical formulae; complete design of simple engine. Supplemented by course 35. Lectures and recitations. Printed notes, blue prints, and drawings of best types of modern engines. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 9:30; Professor CHURCH, 26 M. H.

35. Drawing and Designing. Drawing-room practice accompanying course 34; as far as possible, complete drawings of an engine are made from calculations and designs developed in course 34. Three-fifths course.

Fall, Tuesday, Thursday, and Friday, 1:00; Professor CHURCH, 25 M. H.

36. Drawing and Designing. Continuation of course 35 and drawing-room and office work accompanying course 43, Mechanical Engineering. References made chiefly to blue prints and mechanical drawings of actual power and manufacturing plants. Two-fifths course.

Winter, Tuesday, Thursday, and Friday, 1:00; Professor CHURCH, 25 M. H.

37. Drawing and Designing. Continuation of course 36 and specialized engineering drawing. Prerequisite, course 36. Three-fifths course.

Spring, Tuesday, Thursday, and Friday, 1:00; Professor CHURCH, 25 M. H.

38. Gas Engine Design. Lectures, conferences and drawing-room practice for advanced and graduate students.

Hours to be arranged. Professor CHURCH, 26 M. H.

NOTE:—Students taking the electrical course take designing and drawing courses 57, 58, and 59, instead of 35, 36, and 37.

Courses in Steam Engineering, Manufacturing, Etc.

40. Thermodynamics of Engineering. Mechanical theory of heat, thermodynamics of gases and vapors, with special application to steam and other heat engines, air, and refrigeration. Prerequisites, Mechanics 5 and 6. Lectures and recitations. Peabody's Thermodynamics of the Steam Engine.

Spring, 8:30; Professor JONES, 16 M. H.

41. Heat Engines and Motors. Expansive working of steam and gas, principles of design, construction and operation of steam engines, air compressors, gas engines, and refrigerating machines. Prerequisite, course 40. Lectures and recitations supplemented by course 73. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 8:30; Professor JONES, 16 M. H.

42. Steam Boilers. Heating value of fuels, combustion, economical production of steam; application of theory and practice in the design of steam boilers, chimneys, and accessories; steam piping and distribution. Prerequisite, course 31. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 9:30; Professor CHURCH, 26 M. H.

43. Power Plant Design. Embodies the details of the earlier courses of instruction in prime movers and motive-power machinery in respect to the design of steam and electric power and hydraulic plants for power transmission and manufacturing purposes; location of the plant; selection, arrangement, subdivision into units and installation; economics, organization and management of power and manufacturing plants; engineering specifications. Lectures and accompanying course 36. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 8:30; Professor JONES, 16 M. H.

44. Power Plant Design. A continuation of course 43 for graduates and advanced students. Lectures, assigned reading, and designing. Hours to be arranged; Professor JONES, 16 M. H.

45. Machinery and Mill Work. Construction of shops and manufacturing plants, arrangement of machines, hoisting and conveying machinery. Lectures, recitations, and designing. Elective for seniors. Winter, 11:30; Professor CHURCH, 14 M. H.

46. Heating and Ventilating. Principles, comparative merits and design of various systems of ventilating, heating by hot air, hot water, steam, electricity. A careful study of the systems in the different University buildings. Prerequisite, Physics 8. Lectures and recitations. Carpenter's Heating and Ventilating Buildings. Elective. Hours to be arranged; Mr. GRUMBEIN, 16 M. H.

47. Materials of Engineering. A study of the vorious materials used in engineering, the source, manufacture, qualities, cost, etc. Prerequisite, Mechanics 4.

Hours to be arranged; Professor JONES, 16 M. H.

48. Steam Turbines. Flow of saturated and superheated steam and the theory and design of the steam turbine. For advanced and graduate students. Prerequisite, Heat Engines 41.

Term and hours to be arranged; Professor CHURCH, 26 M. H.

49. Gas Engines and Gas Engineering. The study of fuel gases, gas production and transmission, gas engines, etc. For advanced and graduate students. Prerequisite, Heat Engines 41.

Term and hours to be arranged; Professor JONES, 16 M. H.

Courses in Electrical Engineering.

For elementary courses in the theory of electricity, see the announcement of the Department of Physics, page 105.

50. Applied Electricity. An elementary course for special students. Management of dynamos and motors, wiring calculations, house wiring and line construction. This course will be given upon the application of four or more students.

Spring, 11:30; Professor JONES, 16 M. H.

51. Electrical Machinery. Principles of design, construction and operation of direct current machinery. Prerequisite, Physics. 11 and 12. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 9:30; Professor DICKINSON, 15 M. H.

52. Electrical Machinery. Principles of design, construction and operation of alternating current machinery. Prerequisite, Physics 11 and 12. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 9:30; Professor DICKINSON, 15 M. H.

53. Electrical Machinery. Theoretical consideration of the design and performance of alternating current motors. Prerequisite, course 52. Two-fifths course.

Spring, Wednesday and Friday, 10:30; Professor DICKINSON, 15 M. H.

54. Electric Power Transmission. Transmission of electrical energy from generating stations to points of distribution for general utilization. Theoretical consideration of underlying principles, practical problems, study of descriptive literature, observation. Prerequisite, Physics 11 and 12. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 10:30; Professor DICKINSON, 15 M. H.

55. Electrical Distribution. The distribution of electrical energy for use in mines, shops, and factories. Special attention will be given to the application of electricity to mining. Prerequisite, course 54. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 10:30; Professor DICKINSON, 15 M. H.

56. Electric Lighting and Railways. The distribution and utilization of electrical energy for lighting and traction. Principles of design, construction, installation and operation of electric-lighting and railway units and systems. Three-fifths course.

Spring, Monday, Wednesday, and Friday, 9:30; Professor DICKINSON, 15 M. H.

57, 58, 59. Designing and Drawing. Designing and drawing dynamos, motors, transformers, switchboards, and power stations. Three-fifths course, or nine hours a week for each course.

Fall, Winter, and Spring, Monday, Wednesday, and Friday, 1:30; Professors CHURCH and DICKINSON, 25 M. H.

60, 61, 62. Electrical Engineering Laboratory. Practical management of electrical machinery; study of switchboards; calibration of instruments for electrical measurements; investigation of losses in the utilization of electrical energy; study of electrical relations in transmission lines; testing arc and incandescent lighting units and systems; determination of efficiencies and characteristics in laboratory and commercial tests of dynamos, motors, transformers, and other electrical apparatus. To accompany courses 51, 52, and 53. Prerequisite, Physics 11 and 12. Two-fifths course each.

Fall, Winter and Spring, Tuesday, Thursday or Saturday, 8:00; Professor DICKINSON, 4 M. H.

63. Electrical Research. Laboratory investigations in special lines of electrical studies. For advanced and graduate students. In 1907-8-9, investigation of a.c. motor commutation and losses.

Hours and credits to be arranged; Professor DICKINSON, 4 M. H.

64. Electrical Engineering, Seminar work for advanced and graduate students. Special topics will be selected for study and discussion.

Hours and credits to be arranged; Professor DICKINSON, 13 M. H.

65. Telephone Engineering. A course for advanced students. Lectures and recitations on the development, physical theory, construction and operation of telephonic apparatus. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 11:30; Professor DICKINSON, 15 M. H.

66. Electricity for Mining Engineers. The generation and distribution of electric energy and its utilization in lighting and for the various electrically-driven machines used in mining operations. Includes laboratory work. Prerequisites, Physics 11 and 16, Mechanism 24, Mech. Lab. 71. Three-fifths course.

Spring, M., W. and F., 11:30; Professor DICKINSON, 15 M. H.

Courses in Experimental Engineering

70. Mechanical Laboratory. The comparison of experimental results and determination of physical laws from observation; theory, calibration and use of slide rule, planimeters, steam engine indicators, steam gauges, and thermometers; calorimeter tests for testing value of coal and natural gas; testing lubricating oils; analysis of flue gases. Prequisite, or accompanying, Mechanics 2 Carpenter's Experimental Engineering. One-third course.

Fall, Saturday, 8:00; or Friday, 1:30; Professor JONES, 10 M. H.

71. Power Measurements. Efficiency tests of simple engines, pumps, dynamos, motors, and machinery of power transmission; measurements of power by Prony brake, rope brake, Alden absorption dynamometer, transmitting dynamometer; steam engine indicator practice and simple valve setting; determination of the quality of steam, test of small steam boiler. Prerequisite, or accompanying, Mechanics 12. One-third course.

Winter, Saturday, 8:00; or Friday, 1:30; Professor JONES, 10 M. H.

72. Testing Materials of Engineering. Tensile, torsional, compressive, and transverse tests of wrought iron, cast iron, steel, and timber; transverse, compressive, asd absorption tests of stone, brick, cement, and concrete; also tests for fineness, specific gravity, time of setting, and constancy of volume of cement. Prerequisite, or accompanying, Mechanics 4. One-third course.

Spring, Saturday, 8:00; or Friday, 1:30; Professor JONES, 10 M. H.

73. Mechanical Engineering Laboratory. Experimental work in thermodynamics, tests of injectors, calorimeters, steam and oil separators, non-conducting coverings; flow and quality of steam, practice in valve setting, behavior of steam in the cylinder; economy tests of hot air engines, steam engines, gas engines and steam boilers; such other work as may be assigned. Prerequisite, Mechanical Engineering 40. Two-fifths course.

Fall, 1st section, Saturday, 8:00; 2nd section, Tuesday, 8:30; 3rd section, Thursday, 8:30; other sections as assigned.

Professor JONES and Mr. GRUMBEIN, 10 M. H.

74. Mechanical Engineering Laboratory. Tests of steam heating apparatus; duty trials of steam pumps; efficiency tests of air compressors; hydraulic motors, fans, blowers, etc.; application of

Hirn's analysis to the steam engine; flow of water through pipes and orifices, calibration of water meters. Two-fifths course.

Winter, 1st section, Saturday, 8:00; 2nd section, Tuesday, 8:30; 3rd section, Thursday, 8:30; other sections as assigned.

Professor JONES and Mr. GRUMBEIN, 10 M. H.

75. Mechanical Engineering Laboratory. Combined tests of performances of boilers, engines, electrical and other power transmission machinery; testing of plants away from the University when the opportunity affords; special research work. Prerequisites, Mechanical Engineering 74. Two-fifths course.

Spring, hours to be aranged; Professor JONES and Mr. GRUMBEIN, 10 M. H.

76. Engineering Laboratory. Commercial tests and research work. For graduates and advanced students. Prerequisites, course 75. Credit will be given on the basis of the time spent in the laboratory and the progress of the student.

Hours to be arranged; Professor JONES 10 M. H.

For laboratory courses in electrical engineering see courses 60, 61, and 62.

NOTE:—It is not expected that courses marked "hours to be arranged" will be given every year. Students desiring to take such courses should make known the fact to the instructor as early as possible after the beginning of the school year.

MECHANICS AND APPLIED MATHEMATICS

Professor EMORY

1. **Elementary Mechanics.** The principles of rational mechanics treated without the calculus and from the physical standpoint. For students pursuing the certificate electrical course and those preparing for the work of the artisan, foreman, or draughtsman. Prerequisite, trigonometry. Spring, 10:30; 20 M. H.

2. **Statics.** A study of the composition of forces, polygon of forces, magnitude and resolution, equilibrium of concurring forces, resultants of parallel forces by analytical and graphical methods, moments of forces, couples, equilibrium of non-concurrent forces, center of gravity and moment of inertia by analytical and graphical

methods, the stability of structures, and the stresses in framed and jointed construction. Prerequisite, the calculus.

Fall, 11:30; Spring, 8:30; 20 M. H.

3. **Kinetics.** Laws of motion, motion in vacuum and in resisting medium, central forces, centrifugal force, the pendulum and governor, impulse, work, energy, power, modulus of machine, kinetic energy of revolving masses, work of variable forces, duty of engines, impressive forces, motion of rigid bodies, fly-wheels, conservation and dissipation of energy. Prerequisite, course 2.

Winter, 11:30; Fall, 9:30; 20 M. H.

4. **Applied Mechanics.** Strength of materials. Resistance and elasticity of materials, pipes, cylinders and riveted joints, cantilever and simple beams, tension and compression, resilience, shear and torsion, strength of timbers, iron, steel, stone, cement, elastic limits of materials, factors of safety. Design of simple structures. Prerequisite, course 3. Spring, 11:30; Winter, 9:30; 20 M. H.

5. **Development and Utilization of Power.** Lecture course. A study of the history of the development of the modern pumping engine, railroad locomotive, naval and stationery steam engine, steam turbine, with illustrations and descriptive study of the accessories of these generators. Course arranged for general arts students as well as for engineering students. Required of engineering students; elective for sophomores or seniors. Fall, 8:30; 20 M. H.

6. **Development and Utilization of Power.** Lecture course. History of the development and present practice in the use of pumps, heaters, condensers, economizers, purifiers, pipe connections, chimneys, boilers, and other accessories for steam plants, hot air, gas engines, oil engines, wind and hydraulic engines, binary vapor engines ,air compressors, and other sources of power. Prerequisite, courses 4 and 5. Winter, 8:30; 20 M. H.

NOTE:—Any one of the following courses of half-courses will be given in any quarter at an hour to be arranged.

7. **Development and Utilization of Power.** Text-book course. Mathematical study of power, the Clausius, Rankine and physical methods of analysis of power development, measurement of power, thermodynamics of perfect gases and of vapors, of gas engine and steam cycles, computation of the size and efficiencies of generators, and a complete calculation for power plant to perform some special work, such as water supply, coal handling or other mining operation,

etc. Advanced course in power, study of the economical development of power and the designing of power. For graduates. 20 M. H.

8. **Materials of Engineering and Construction.** Seminary course in the study of the various materials used in engineering, architecture, and manufactures, their occurrence, modes of treatment, uses, costs, efficiency, etc. For engineers and others having preparation. , 20 M. H.

9. **Building Superintendence and Architectural Engineering.** Construction and inspection of foundation, stone, cement, brick work, iron and steel work, carpentry and mill work, roof trusses, roof coverings, cage construction and veneer work for high buildings, preservation of iron work, fire proofing, plastering, inspection of gas fitting, electric wiring, systems of heating, ventilating, etc. For seniors and graduates. 20 M. H.

10. **Applied Mathematics.** A special course for those making mathematics their major and those who desire a study of its applications to mathematical instruments and appliances and to the methods of analysis. An application of the calculus to mechanics, physics, and exact measurements. Prerequisites, integral calculus. One-half course; may accompany course 11. 20 M. H.

11. **Method of Least Squares.** Errors of observations; principles of probability, weights of observations, principle of least squares, probable errors of observations, corrections of observations, normal equations, empirical formulae. For seniors and graduates. Prerequisites, physics and calculus. 20 M. H.

12. **Differential Equations.** .Study of the differential equation of the first order and first degree, first order and higher degrees, including special application to mechanical and physical problems. Prerequisites, calculus. Half course or full course. 20 M. H.

MINING ENGINEERING

Professor BRINSMADE

1. **Mine Visits.** A study of surface and underground details of several active coal mines near Morgantown, followed by written reports of observed data. Prerequisites, Physics 7, Drawing 22 .Two-fifths course. Spring, Tuesday and Thursday, 1:30; 16 M. H.

2. Mine Surveying. Surface and underground survey of an active coal mine followed by platting of map from field notes. Methods of sampling and estimation of mineral reserves. Prerequisites, Surveying 4. Two-fifths course.

Spring, Wednesday and Friday, 1:30; 16 M. H.

3. Mining. Earthwork; rock drills; explosives; breaking ground; breast, overhand, and underhand stoping; stability of excavations and their support by timber, steel, and masonry; shaft sinking in hard and soft ground; tunnelling by various timber and shield systems. Prerequisites, Chemistry 4, Physics 8, Geology 2, Mechanics 4, and Mechanical Laboratory 72. Three-fifths course.

Fall, Monday, Wednesday, and Friday, 9:30; 16 M. H.

4. Mining. Rock boring; coal cutting; quarry channellers and gadders; head frames and hoisting engines for minerals and men; gravity planes; aerial tramways; underground haulage by animals and tractors; drainage and pumps. Prerequisites, same as for Mining 3 with addition of Mechanism 24, Hydraulics 12, and Heat Engines 41. Three-fifths course.

Winter, Monday, Wednesday, and Friday, 11:30; 16 M. H.

5. Mining. Means of prospecting; classes of mineral deposits and ways of exploitation; special systems for working coal; mine air and gases; ventilation and ventilators; lighting and signalling systems; fires and accidents; tipple and surface arrangements. Prerequisites, Mining 3 and 4. Three-fifths course.

Spring, Monday, Wednesday, and Friday, 10:30; 16 M. H.

6. Mine Design. The designing of mining equipment to suit practical conditions. Prerequisites, Mining 3 and 4, Power Plants 36 and 43. Parallel course to Mining 5. Two-fifths course.

Spring, Tuesday and Thursday, 10:30; 25 M. H.

7. Mine Laboratory. Practice and experiments with rock and coal mining machinery; tests of explosives, gases, lamps, etc. Prerequisites, Mechanical Laboratory 73, Physics 8, Chemistry 4. Two-fifths course

Winter, 1:30 and 8:00 Saturday; 10 M. H.

8. Mine Law. The laws of the United States and of foreign countries relating to mining and mineral lands. Prerequisites, Surveying 4. One-fifth course Fall, 1:30; 16 M. H.

9. Ore Dressing. Preparation of coal and other minerals for smelteries or the consumer. Methods of sorting, crushing, grinding, sizing, elevating and conveying; separation by washing or by the dry processes; general arrangement of dressing mill machinery. Prerequisites, Mechanism 24, Hydraulics 12, Physics 8, Mineralogy 6. Two-fifths course

Fall, Tuesday and Thursday, 9:30; 16 M. H.

10. Metallurgy. Heat measurement; natural fuels; combustion; manufacture of charcoal, peat, and coal briquettes; coke, refined oil, gas and other artificial fuels; fusibility and slags; refractory linings. Prerequisites, Chemistry 4, Physics 8, Geology 2. Two-fifths course.

Winter, Tu. and Th., 8:30; 16 M. H.

11. Metallurgy. Kilns and the burning of brick, lime and cement; reverbatory furnaces and glass-making; blast-furnaces; outline of iron and steel metallurgy. Prerequisite, Metallurgy 10. Two fifths course.

Spring, Tu. and Th., 11:30; 16 M. H.

12. Mine Operation. Industrial economics; organization and care of labor; mine accounting and cost-keeping systems; examination and evaluation of mines; manager's reports and corporation financing. Parallel course with Mining 4. Two-fifths course.

Winter, Tu. and Th., 11:30; 16 M. H.

NOTE:—The following advanced courses will also be given when there is sufficient demand:

13. Mine Design. Continuation of course 6. Plans for surface and underground development and equipment.

Credit and hours to be arranged; 25 M. H.

14. Mine Laboratory. Continuation of Course 7. The investigation of special mining problems.

Credit and hours to be arranged; 10 M. H.

15. Ore Dressing. Continuation of Course 9. Theory and practice of mineral concentration in some detail. Three-fifths course.

Hours to be arranged; 16 M. H.

16. Mill Design. Plans for mineral dressing, coal-washing or cement mills. Prerequisites, Ore Dressing 9.

Credit and hours to be arranged; 25 M. H

17. Metallurgy. Continuation of Course 11. The metallurgy of iron and steel in some detail. Two-fifths course.
Hours to be arranged; 16 M. H.

18. Metallurgy. The reduction of non-ferrous metals; including the chief dry and wet processes for gold, silver, copper, nickel, zinc, lead, etc. Three-fifths course. Prerequisite, Metallurgy 11
Hours to be arranged; 16 M. H.

19. Electro-metallurgy. The electric processes for the reduction or refining of iron, copper, lead, zinc, aluminum, etc. Two-fifths course. Prerequisites, Physics 11 and Metallurgy 11. Parallel to Metallurgy 18. Hours to be arranged; 16 M. H.

20. Metallurgy Design. Plans for metallurgical works to suit given technical and economical conditions. Prerequisite Metallurgy 11. Credit and hours to be arranged; 25 M. H.

NOTE:—Courses 3, 4, 5, 9, 10, 11, 16, 17 and 18 are given by lectures and recitations illustrated by blue-prints, catalogues and working models. The students are required to solve many practical problems and to visit those mines and works around Morgantown which are carrying on the processes studied.

THE COLLEGE OF AGRICULTURE.

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

THOMAS CLARK ATKESON, PH.D., *Dean and Professor of Agriculture*

DANIEL WEBSTER WORKING, A.M., *Superintendent of Agricultural Extension Work*

ARETAS WILBUR NOLAN, A.B., *Assistant Professor of Horticulture, Forestry, and Entomology*

FREDERICK RANDOM WHIPPLE, M.D.V., *Assistant Professor of Veterinary Medicine*

CHARLES AUGUSTUS LUEDER, D.V.M., *Instructor in Dairying and Veterinary Anatomy*

CHARLES WALKER SPRINGER, V.M.D., *Instructor in Veterinary Pharmacology*

———————, *Instructor in Veterinary Surgery*

ALEXANDER REID WHITEHILL, PH.D., *Professor of Chemistry*

SAMUEL B. BROWN, A.M., *Professor of Geology*

BERT HOLMES HITE, M.S., *Professor of Agricultural Chemistry*

ROBERT ALLEN ARMSTRONG, A.M., *Professor of English Language and Literature*

CHARLES HENRY PATTERSON, A.M., *Professor of Rhetoric*

JOHN NATHAN SIMPSON, M.D., *Professor of Anatomy and Physiology*

JUSTIN FRANK GRANT, M.D., *Professor of Anatomy and Pathology*

JOHN LEWIS SHELDON, PH.D., *Professor of Botany and Bacteriology*

ALBERT MOORE REESE, PH.D., *Professor of Zoology*

CHAUNCEY WILLIAM WAGGONER, PH.D., *Professor of Physics*

JOHN B. GRUMBEIN, B.S.M.E., *Instructor in Mechanical Engineering and Foreman of Wood Shop*

THOMAS HOWARD CATHER, *Instructor in Machine Shop and General Foreman of Shops*

RUFUS WEST, *Assistant in Metal Working*

AIM AND SCOPE

This College offers to students a training designed to fit them for the practice of agriculture, while opportunity for general culture is also offered. Its object is the training of students to be not only progressive farmers, but good citizens and successful business men as well.

The technical portion of the courses offered in this College constitutes about one-half of the entire work of the student. In studying these technical subjects, the aim is to make plain the principles of agricultural science, and to give such practical instruction as conditions and facilities will permit.

EQUIPMENT

The laboratories and apparatus of the scientific departments of the University, and the libraries of the Agricultural Experiment Station and University are at the command of the students in the College of Agriculture. The farm of the Agricultural Experiment Station, together with its gardens, experiment plats, laboratories, and collections, are available for students desiring to acquaint themselves with the practical and scientific methods of conducting agri-

cultural operations, and to investigate scientific questions relating to the progress and development of agriculture.

The farm is equipped with barns, stables, and other buildings, and presents a variety of soils and conditions existing upon many of the farms of the state. Upon this farm are kept different varieties of farm animals and the most improved agricultural implements. Facilities are provided for studying the most economical methods of handling live stock and their products, including poultry.

The dairy equipment consists of one "National" power separator, several small hand separators of different makes, one power and one hand churn, one 200 gallon tempering vat, one 75 gallon vat, one power and one hand butter worker, apparatus for the Babcock test, preservative tests, the acid test. This equipment occupies one-half of the basement of Martin Hall.

COURSES OF STUDY

DEGREE COURSES

Bachelor of Science in Agriculture

Entrance Requirements. Students will be admitted to the freshman class in this course on completion of twelve and one-half units, of which two units in English, one in mathematics, one in history, and one-half in botany are prescribed, and the remaining eight elective.

Requirements for Graduation. The degree of Bachelor of Science in Agriculture will be conferred upon any student who satisfies the above entrance requirements and satisfactorily completes forty-two college courses, of which four in agriculture, two in animal husbandry, one in dairying, three in horticulture, two in veterinary science, one in agricultural chemistry, and one in agricultural physics are prescribed.

At least six additional courses must be elected from the technical courses announced in the College of Agriculture, and the remaining twenty-two may be elected from the courses given in the College of Agriculture or the College of Arts and Sciences. The dean of the College of Agriculture will act as the student's class officer and adviser.

Doctor of Veterinary Science

Entrance Requirements. Students are admitted to the first year class in this course on completion of six units, of which two units in English are prescribed. Students who have completed the Diploma Course in Agriculture will also be admitted to the first year of this course.

College Requirements. The degree of Doctor of Veterinary Science will be conferred on any student who satisfies the above entrance requirements and satisfactorily completes thirty-three prescribed courses as named in the distribution of work given below.

DISTRIBUTION OF WORK IN THE VETERINARY COURSE

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	Vet. Anatomy 1, (60)	Vet. Anatomy 2, (60)	Vet. Anatomy 3, 2-3, (40) Embryology 28, 1-3, (20)
9:30	Physiology 1, (60)	Chemistry 2, (60)	Vet. Materia Med. 5, (60)
10:30	Vet. Anatomy lab., (60)		Vet. Pharmacy 6, 1-2, (30) Breeds and Breeding 7, 1-2, (30)
11:30	Chemistry 1, (60)	Physiology 2, (60)	Surgical Restraint 29, 1-2, (30) Vet. Dentistry 30, 1-3, (20) Animal Locomotion 31, 1-6, (10)
1:30	Histology 1, (140)	Chemistry lab., (24) Vet. Anatomy lab., (141)	Vet. Anatomy lab., (100) Embryology lab., (10) Pharmacy and Materia Medica lab., (30)
7:30		Surgical Exercises, (80)	

Second Year

8:30	Bacteriology 4, (60)	Zoology 2, 2-5, (24)	Stock Judging 5, 1-2, (30) Stock Management 4, 1-2, (30)
9:30	Vet. Anatomy 4, 2-3, (40) Nutrition 32, 1-6, (10) Hygiene 33, 1-6, (10)		Vet. Medicine 10, (60)

10:30	Vet. Medicine 9, (60)	Botany 2, (60)	Vet. Surgery 14, (60)
11:30	Vet. Surgery 13, (60)	Vet. Therapeutics 7, (60)	Vet. Therapeutics 8, 2-3, (40) Disease Control 34, 1-3, (20)
1:30	Bacteriology lab., (72) Clinics, (120)	Zoology 2, 3-5, (36) Clinics, (96)	Clinics (200)

Third Year

8:30	Meat Inspection 17, (60)	Feeds and Feeding 3, (60)	Lameness 20, 5-6, (50) Shoeing 21, 1-5, (10)
9:30	Vet. Surgery 15, (60)	Laboratory Diagnosis 18, 5-6, (50) Urin Analysis 19, 1-6, (10)	Med. Jurisprudence 1, 1-3, (20) Toxicology 22, 1-6, (10) Dairy Inspection 23, 1-3, (20) Milk Analysis 24, 1-6, (10)
10:30	Vet. Medicine 11, (60)		Vet. Obstetrics 25, 5-6, (50) Post Mortems 27, 1-6, (10)
11:30	Parasitology 16, (60)		Vet. Medicine 12, (60)
1:30	Clinics, (200)	Pathology 2, (60) Pathology lab., (120)	Soundness 26, 1-3, (20) Clinics, (180)

NOTE:—Each course for which University credit is given is followed by the department number of the course. The credit value of fractional courses is also given. The numbers in parenthesis indicate the number of hours work in each subject required by the National Department of Agriculture to secure its approval of the degree conferred.

DIPLOMA COURSE IN AGRICULTURE

This course consists of thirty courses, all of which are prescribed, as named in the distribution of work given below. A diploma of graduation will be granted on completion of this course.

DISTRIBUTION OF THE WORK IN THE DIPLOMA COURSE

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	*History 1	*History 2	*History 3
9:30	*English 1	*English 2	*English 3
10:30	Botany 1	Botany 2	Entomology 1 and 2
11:30		Home Dairying 1	

Second Year

8:30	Horticulture 1	Horticulture 2 and 3	Horticulture 4
9:30	Chemistry 1	Chemistry 2	Chemistry 3
10:30	*English 4	*English 5	*English 6
11:30		Animal Hus. 1	

Third Year

8:30	Physics 1	Animal Hus. 3	Animal Hus. 4
9:30	Agriculture 1	Agriculture 2	Agriculture 4
10:30	*Mathematics 1	*Mathematics 2	*Mathematics 3
11:30		*English 7	

NOTE:—The courses marked with a star are described in the announcements of the University Preparatory School

CERTIFICATE COURSE IN AGRICULTURE.

No entrance requirements are made for this course. A certificate, indicating the work done, will be granted on completion of this course, which may be accomplished in one school year, or in any three quarters of twelve weeks each. This course consists of eleven full courses, at least nine of which shall be elected from the technical courses announced in the College of Agriculture. The other two

courses may be elected from those given in the Preparatory School or the College of Arts and Sciences, subject to the advice of the dean of this College.

The object of this course is to give men who are engaged in farming, or who expect to become farmers, an opportunity to learn something of the principles and sciences involved in their occupation.

SHORT COURSES

Agriculture. This course covers a period of twelve weeks during the winter term, and is designed to give students, in the briefest time possible, some knowledge of the principles of agriculture, horticulture, soils, farm crops, fertilization, and the principles of breeding, caring for and feeding animals.

Animal Husbandry. This is a winter quarter course in veterinary science, stock breeding, stock feeding, and a general survey of the subject of animal husbandry. The purpose is not to make veterinary surgeons, but to enable students to diagnose properly the principal diseases among farm animals; to treat common accidents; to use preventive measures, and to understand the principles of breeding and feeding domestic animals.

Horticulture. This is work which may be taken in the winter quarter ,and consists of studies in principles of fruit culture and pomology. Instruction in botany and entomology should be taken parallel with these subjects.

Dairying. Instruction will be given both by lecture and demonstrations, and each student will have an opportunity to become expert in the practical operations of dairying. Among the subjects which will be discussed will be the use of the Babcock test, the ripening of cream, separating, churning, salting, working, and packing butter; the care of milk; the selection and care of dairy cows, feeds, and feeding; the construction and care of stables.

SPECIAL WINTER COURSE

The instruction in this course begins January 9, 1911, and continues for four weeks. The work is intended primarily for those who desire some practical and theoretical knowledge of the latest methods of agriculture, and whose time for study is limited. The instruction, which is of a very practical nature, is given by the professors in the College of Agriculture and eminent specialists from elsewhere. Students are given ample opportunity to test in the

laboratory many of the theories discussed in class, thereby acquiring a thorough mastery of them.

Methods of conducting farmers' institutes and the subject matter that should be presented at them receive careful attention. Institute instructors will be especially interested in this feature of the work.

AGRICULTURAL EXTENSION WORK.

Professor WORKING, Superintendent

In the development of their purpose to make the work of the University increasingly useful to the people of the State, the authorities have established an Agricultural Extension Department. This department will carry the work of the College of Agriculture to the farmers and young people of the State by means of extension schools in suitable centers, by lectures at institutes and elsewhere, by correspondence instruction, and by organizing reading courses and promoting reading classes wherever possible.

The department will be at the service of school officers and teachers who desire to introduce the teaching of agriculture into elementary and high schools. It invites correspondence from those who are interested in the movement to make the schools, especially those of the rural districts, more directly helpful to the people on the farms by giving them a deeper and more sympathetic insight into the vital problems of plant and animal life, and the processes by which plants and animals can be made to contribute more helpfully to the welfare of the country.

TEACHERS COURSE IN DOMESTIC SCIENCE

In connection with the College of Agriculture a two-year course in domestic science is offered. This course is intended primarily for those who intend to become teachers of domestic science or to specialize in that subject.

Requirements for Admission. The requirements for admission to the course in domestic science are the same as for entrance to the College of Arts and Sciences. See page 55.

Requirements for Special Certificate. A special teacher's certificate in domestic science will be given to students who satisfy the above requirements and complete the twenty-two college courses outlined below.

DISTRIBUTION OF WORK IN DOMESTIC SCIENCE

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30			Education 12
9:30	Psychology 2	Ethics 3	English 11
10:30	English 10		
11:30	Chemistry 1	Chemistry 2	Chemistry 3
2:30	Sanitation 1, 1-5	Domestic Architecture 2, 1-5	Domestic Architecture, 3, 1-5
	Textiles 4, 2-5	Textiles 5, 2-5	Cookery 8, 2-5
	Millin'y 6, 2-5	Millinery 7, 2-5	Sewing 11, 2-5

Second Year

8:30		Bacteriology 1	
9:30	Physiology 1		
10:30	History of Costume 19	Design 20	Color Study 21
11:30	Education 4	Education 5	Education 10
2:00	Decoration 14, 1-5	Household Econ. 15, 1-5	Hygiene 16, 1-5
	Cookery 9, 2-5	Cookery 10, 2-5	Dietetics 17, 2-5
	Sewing 12, 2-5	Sewing 13, 2-5	Home Nursing 18, 2-5

DEPARTMENTS OF INSTRUCTION

Only the technical courses are described here. For the other courses which may be elected by students in the College of Agriculture, see the courses in the College of Arts and Sciences. Courses marked by a star may be offered for credit in the College of Arts and Sciences.

AGRICULTURE

Professor ATKESON

***1. Soils and Farm Crops.** First principles of agriculture; origin, cultivation, drainage, and classification of soils; indications of fertility; production and handling of farm crops; preparation of land for the seed and subsequent care of the plant. Lectures and recitations. Fall, 9:30; 8 M.

2. **Fertilizers and Manures.** Farm yard manures; humus and vegetable molds; composts; modes of applying manures; maintenance of meadows and pastures by manuring; chemical fertilizers; a general discussion of the methods of extensive and intensive farming. Lectures and recitations. Winter, 9:30; 8 M.

*3. **Agricultural Science.** Relation of soil and air to plants; the atmosphere as a source of plant food; relations of water to the soil; movements of water in the soil; irrigation; drainage; soils as chemical agents; rotation of crops; how plants grow and feed. Lectures and recitations. Spring, 11:30; 8 M.

*4. **Rural Economics.** Farming as a business; method of keeping farm accounts; a brief study of the laws that directly concern the farmer; how the farmer is affected by industrial and social conditions; the mutual relations of agriculture and other industries; value and prices of land and agricultural products; land tenure; co-operation; a careful study of all questions affecting agriculture. Lectures and recitations. Spring, 9:30; 8 M.

*5. **History of Agriculture.** A general history of agriculture, beginning with ancient times and tracing the history of agriculture, agricultural methods, and the development of trade and commerce through all the ages to the present; a special study of present practices and methods of competing with foreign countries. Lectures and recitations. Spring, 10:30; 8 M.

6. **Corn Breeding and Judging.** This course includes a study of the leading varieties of corn and their adaptation to different localities and of the best methods of improving corn by selection and breeding. Corn judging will be given special attention. One-half course. Fall, 10:30; 8 M.

7. **Forage Crops.** How to cultivate, harvest, store, and use forage crops; silos and silage; soiling, folding ,and pasturing. Lectures and recitations. One-half course. Fall, 10:30; 8 M.

8. **Cereal Crops.** A comprehensive study of the history, characteristics, and cultivation of the grain-producing plants, as related to American and West Virginia conditions. Lectures and recitations. Spring 11:30; 8 M.

9. **Farm Equipment.** Selecting, planting, and equipping farms; planning and erecting farm buildings and fences; building roads;

farm vehicles and machinery; farm implements and the application of different kinds of power for farm purposes. Lectures and recitations. One-half course. Fall, 8:30; 8 M.

*10. **West Virginia Agriculture.** Agricultural, horticultural, dairy, and live stock possibilities of West Virginia; local conditions throughout the state will be considered in connection with their adaptation to special agricultural purposes. Class discussions and required papers on assigned subjects; reference reading; lectures. One-half course. Fall, 8:30; 8 M.

ANIMAL HUSBANDRY

Professor ATKESON and Dr. LUEDER

1. **History and Characteristics of Breeds.** This course deals with the improved breeds of horses, cattle, sheep and swine. A study of the origin, development, distribution and characteristics of each breed will be made.

Winter, 11:30; Professor ATKESON, 8 M.

*2. **Principles of Breeding.** What is meant by breeding; how to attain the ideal; heredity; atavism, variation, selection, correlation, in-and-in breeding, cross breeding and grading; influence of climate and environment upon habits and development. Lectures and recitations. Winter, 10:30; Professor ATKESON, 8 M.

7. **Breeds and Breeding.** A part of courses 1 and 2, intended primarily for veterinary students. One-half course. 30 hours.

Spring, 10:30; Professor ATKESON.

*3. **Feeds and Feeding.** Laws of animal nutrition; composition and digestibility of feeding stuffs; feeding farm animals; feeding for milk, muscle, and fat; sources of food, how the animals use food; preparation of food; influence of food on animal form; study of rations and feeding standards. Lectures and recitations.

Winter, 8:30; Professor ATKESON, 8 M.

32. **Principles of Nutrition.** Primarily for veterinary students. One-sixth course. 10 hours.

Fall, 9:30; Professor ATKESON, 8 M.

4. **Live Stock Management.** Care of domestic animals in barn

and field; the management of flocks and herds; the care of work animals and driving horses. Lectures and recitations.

Spring, 8:30; Dr. LUEDER, 22 M.

5. **Stock Judging and Pedigree.** This course will consist of a study of standards and practice in judging by score cards and the tracing and writing of pedigrees. The University stock and that of near-by stock men will be used in judging.

Fall, hour to be arranged; Dr. LUEDER, 22 M.

6. **Beef, Pork, Mutton, and Wool Production.** A systematic study of the most successful and economical methods of producing cattle, hogs, and sheep for the market; production of baby beef; winter lambs; wool production; finishing pigs of lard and bacon types for market. Prerequisite, Animal Husbandry 3.

Spring, hour to be arranged; Dr. LUEDER, 22 M.

BOTANY AND BACTERIOLOGY

Professor SHELDON

See announcements in the College of Arts and Sciences, page 65.

CHEMISTRY

Professor HITE

25. **Agricultural Chemistry.** A course of lectures discussing as far as possible the more instructive and important applications of chemistry to agriculture, but having to do primarily with the maintenance of soil fertility. Prerequisitess, Chemistry 1-6.

Spring, 10:30; A.

For courses in elementary chemistry see page 67.

DAIRYING

Mr. LUEDER

1. **Dairying.** This course consists of laboratory work giving the student the practical knowledge of the care and handilng of milk; separators, separation of cream; ripening of cream, including starter and the acid test; churns and churning; working, salting, printing and packing butter; use of Babcock test for butter fat;

and care of dairy machinery. Enough laboratory work will be given to make each of the students proficient in each of the above operations.

Winter, 1:30; 22 M.

2. **Testing Dairy Products.** This course consists of lectures and recitations on the composition of milk, different tests for butter fat, tests for preservatives in dairy products, application of lactometer, calculation of butter and cheese yields, and butter analysis. This course to be taken in connection with course 1. One-half course.

Winter, 10:30; 22 M.

24. **Milk Analysis.** A part of course 2 offered especially for veterinary students. One-sixth course. 10 hours.

Spring, 9:30; 22 M.

3. **Dairy Bacteriology.** This course consists of a study of bacteria as they affect the dairyman, including contamination of milk, disease germs transmissible to man through milk, and preservation of milk for commercial purposes. This course to be taken in connection with course 1. One-half course.

Winter, 10:30; 22 M.

4. **Dairy Building.** This course is designed to give the student a working knowledge of the material and methods in designing and building dairy stables, creameries and cheese factories. Plans and dimensions of building will be made by each student showing internal arrangements of machinery, estimate of belting, pulleys, etc. One-half course.

Spring, hour to be arranged; 22 M.

5. **The Dairy Breeds.** This course deals with the history and characteristics of the dairy breeds. A study of each of the improved breeds is taken up with special reference to families and individuals in America. The requirements for advanced registry are studied, and the methods of making test for official records. This course is designed to meet the requirements of students who wish to make dairying a specialty, and is given only to students who have attained the grade of sophomore.

Spring, hour to be arranged; 22 M.

ENTOMOLOGY

Assistant Professor NOLAN

*1. **General Entomology.** Lectures and recitations on the

characteristics of the orders, sub-orders, and more important families of insects; habits and habitat of representative species. Half-course.

Fall and Spring, 10:30; 27 M.

*2. **Morphology of Insects.** Laboratory and field study of life history, anatomy, habits, and life relations of insects and their allies. Half-course. Fall and Spring, 10:30; 27 M.

This course is to be taken in connection with course 1.

*3. **Economic Entomology.** Discussion of the more important insect pests, and of methods of controlling them. Economic problems connected with applied entomology are discussed and reported upon and field observations made. Winter, 10:30; 27 M.

DOMESTIC SCIENCE

Miss SCOTT

*1. **Sanitation.** Site, surroundings, and construction of the dwelling-house with reference to health. Lectures and assigned reading. One-fifth course. Fall, 2:00; S.

*2. **Domestic Architecture.** Historical survey of the evolution of the house and the development of domestic architecture in America; Location of dwelling-houses; plans and specifications; interior arrangement and decoration. Lectures, text book, and assigned readings. One-fifth course. Winter, 2:00; S.

*3. **Domestic Architecture.** Continuation of course 2. One-fifth course. Spring; 2:00; S.

*4. **Textiles.** Primitive and modern textiles and their method of manufacture; physical construction and properties of fibres. Two-fifths course. Fall, 2:00; S.

*5. **Textiles.** Continuation of course 4. Two-fifths course. Winter, 2:00; S.

6. **Millinery.** Design and construction of hats; bow making, ribbon work. In this and the following course four hats are made by each student. Students are expected to furnish their own material. Two-fifths course. Fall, 2:00; S.

7. **Millinery.** Continuation of course 6. Two-fifths course. Winter, 2:00; S

*8. **Cookery.** The composition and dietetic value of food ma terials; the general principles of cookery and their application i the preparation of simple dishes. The instruction is largely ind vidual, each student preparting an entire dish. Two-fifths cours Spring, 2:00;

9. **Cookery.** Instruction and practice in the preparation of more complicated dishes. Two-fifths course. Fall, 2:00; S

10. **Cookery.** Continuation of course 9. Planning of menu and serving of meals. Two-fifths course. Winter, 2:00; S

11. **Sewing.** Instruction in hand sewing; plain and fanc stitches and their application. Two-fifths course. Spring, 2:00; S

12. **Sewing.** Measurements; drafting and making of garments machine work. Two-fifths course. Fall, 2:00; S

13. **Sewing.** Continuation of course 12. Two-fifths course. Winter, 2:00;

14. **Household Decoration.** One-fifth course. Fall, 2:00; S.

15. **Household Economics.** One-fifth course. Winter, 2:00;

*16. **Hygiene.** Individual and public hygiene; the importanc of healthful living. One-fifth course. Spring, 2:00; S

17. **Dietetics.** The preparation of food for the sick room. Two fifths course. Spring, 2:00; S.

18. **Home Nursing.** Two-fifths course. Spring, 2:00; S.

19. **History of Costume.** A study of the history of costume showing the use of clothes and the styles of different periods. Each student is required to make a portfolio illustrating the different periods. Fall, 10:30; S.

20. **Design.** Principles of design and their application in the different classes of costumes. The aim of the course is to le

different types of fruit;

udent to recognize and appreciate good design in textiles, clothing, ›usehold decoration and furnishing. Winter, 10:30; S.

21. **Color Study.** Principles of perspective; theory of color; ıctice sketching in pencil and water colors. The aim of the course to familiarize the student with some form of expression so that he y be able to represent line, color, and texture, in original design. Spring, 10:30; S.

FORESTRY

Assistant Professor NOLAN

*1. **Forest Botany.** Systematic and biologic study of trees ıd shrubs, special attention given to the species of economic im- ›rtance. By means of lectures, texts, and laboratory work the stu- ›nt is taught the morphological and silvical characteristics of trees. alf-course. Monday and Friday, Fall, 11:30; 27 M.

*2. **Elements of Silviculture.** A practical study of factors gov- ·ning forest growth and distribution; markings for cuttings; forest ›eding and planting; methods of thinning and cutting. The class ›s constant practice in identifying trees and shrubs by external ıtures. Practical silvicutural work in the University wood-lot. lf-course. Tuesday, Wednesday and Thursday, Fall, 2:00; 27 M.

*3. **Forestry Economics.** Relation of the state to natural re- ources; the forest as a resource; as a condition; factors of forest oduction and business aspects; natural history of forests; princi- es and methods of forest policies; forest policies of foreign na- ›ns; forest conditions of the United States; the forestry movement; rest regulation and administration. Lectures and text-books. alf-course. Winter, 11:30; 27 M.

*4. **Forest Technology.** The history of wood-tissues, leading o the identification of the economic woods of the state, and the more mportant exotic species. Structural, physical, mechanical, and chemical properties of wood, and the influences determining the same; diseases and faults; uses to which woods are best suited. Laboratory work, mill inspection, and class demonstrations. This course is to be taken in connection with course 3. Half-course. Winter, 11:30; 27 M.

- **Forest Management.** The economic principles underlying

the management of forest property by national, state, individual, and corporate owners. Methods of studying the growth and yields of forests. The regulation of farm wood-lots to sustain their productiveness. Forest protection. Lectures and texts. Half-course.

Monday and Friday; Spring, 11:30; 27 M.

6. **Forest Mensuration and Survey.** The course embraces timber cruising and estimating, and lumber inspection; methods of estimating standing timber; topographic surveys of small areas, and forest maps; methods of determining contents of logs, the use of the American log rules; stem analysis, and estimation of rate of tree growth. During the term the student is required to complete an investigation of the growth and yield of some one species, and to prepare a forest working plan of an assigned tract. This course is to be taken in connection with course 5. Half-course.

Tuesday, Wednesday and Thursday, Spring, 2:00; 27 M.

HISTOLOGY AND PATHOLOGY

For courses in these subjects see page 200.

HORTICULTURE

Assistant Professor NOLAN

*1. **Plant Propagation.** A foundation course for subsequent work in pomology. A study of germination of seeds and spores; multiplication by cuttings, layers, stolons, buds, grafts, seed formation, natural and hand pollination; special methods of propagation for each kind of plant. Care of trees and plants. It is advised that Botany 1 be taken before or with this course. Lectures, text-book, and laboratory field work, and greenhouse work.

Fall, 8:30; 27 M.

*2. **Fruit Growing.** Classification of fruits, and the geography of fruit growing; choice of location; meteorological and market conditions; wind-breaks; frosts and freezes; tillage in general; cover crops; fertilizing orchards; laying out of orchards; setting the trees; secondary care; diseases, insects and spraying; harvesting and marketing; storing; the renovation of old orchards. Lectures and texts. Half-course.

Winter, 8:30; 27 M.

*3. **Practical Pomology.** The study and practice of care of orchards; a comprehensive study of the different types of fruit;

preparation and application of the different spray mixtures; methods of combatting insect enemies and fungous diseases; study of greenhouse construction and methods; observation work, and the preparation of tables to show natural determinants of fruit growing. Recitation, laboratory, and field work. This course is to be taken in connection with course 2. Half-course. Winter, 8:30; 27 M.

*4. **Vegetable Gardening.** A study of the general principles of vegetable growing, accompanied by garden practice in the actual growing of the plants. Lectures, text-books, and field work. Spring, 8:30; 27 M.

5. **Landscape Gardening.** Ornamental and landscape gardening with special reference to the beautifying of home and school grounds; suggestions for arrangement of trees, shrubs, and flowers; location and construction of walks and drives; practical problems in designing and planning grounds; making the landscape picture; seasonal studies of ornamental plants. Lectures, texts, and field work. Spring, hour to be arranged; 27 M.

MEDICAL JURISPRUDENCE.

For announcement of course in this subject see page 200.

MECHANIC ARTS.

Mr. WEST, CATHER, and Mr. GRUMBEIN

1. **Woodworking.** Nine hours per week, or 3-5 course.
Fall, Monday, Wednesday, and Friday, 1:30; or Tuesday and Thursday, 1:30, and Saturday, 8:00. Mr. GRUMBEIN, 21 M. H.

5. **Forging.** Nine hours a week, or 3-5 course.
Winter, Monday, Wednesday, and Friday, 1:00; Mr. WEST, 7 M. H.

10. **Machine Work.** Nine hours per week, or 3-5 course.
Spring, Monday, Wednesday, and Friday, 1:00; Mr. CATHER, 11 M. H.

For detailed description of these courses, see page 141.

PHYSICS

Professor WAGGONER

For courses in this subject see page 103.

HYGIENE AND INSPECTION.

Dr. LUEDER and Dr. WHIPPLE

37. Milk and Urine Analysis. Two-fifths course.
Fall, 10:30; Dr. LUEDER, 22 M.

33. Hygiene. The phases of work dealt with are water supply, air, ventilation and building, food supply, habitation, disposition of excreta, state hygiene, municipal hygiene, care and management, hygiene of breeding, military hygiene, and climate. One-sixth course. 10 hours. Fall, 9:30; Dr. LUEDER, 22 M.

23. Dairy Inspection. This subject is given by actual inspection of dairies in the vicinity of Morgantown. One-third course. 20 hours. Spring, 9:30; Dr. LUEDER, 22 M.

17. Meat Inspection. 60 hours.
Fall, 8:30; Dr. WHIPPLE, 26 M.

VETERINARY SCIENCE

Anatomy

Dr. LUEDER

1. Veterinary Anatomy. In this course anatomy is fully explained in its relation to medicine and surgery, and is taught in a most practical manner. This includes lectures, quizes, dissections, and practical demonstrations on the living subject. Dissecting material is furnished by the University free of charge. Text-book, Strangeway's Anatomy. 60 hours. Fall, 8:30; 22 M.

2. Veterinary Anatomy. Continuation of course 1. 60 hours.
Winter, 8:30; 22 M.

3. Veterinary Anatomy. Continuation of course 2. Two-thirds course. 40 hours. Spring, 8:30; 22 M.

4. Veterinary Anatomy. Continuation of course 3. Two-thirds course. 40 hours. Winter, 8:30; 22 M.

28. **Embryology.** The course deals with the elements and methods of embryology of domestic animals, especially of the chick. One-third course. 20 hours. Spring, 8:30, 22 M.

31. **Animal Locomotion.** Lectures illustrated by lantern slides. One-sixth course. 10 hours. Spring, 11:30; 22 M.

*35. **Anatomy and Physiology of Domestic Animals.** For agricultural students.
Spring, hours to be arranged; Dr. WHIPPLE, 26 M.

Pharmacology

Dr. SPRINGER

5. **Veterinary Materia Medica.** This subject is taken up n the first year and the course consists of lectures and practical demonstrations on the living animal. 60 hours. Spring, 9:30; 26 1.

6. **Veterinary Pharmacy.** In this course the student is required to assist in making extracts, tinctures, infusions, blisters, powders, balls, ointments, and liniments and by so doing becomes familiar with all the branches of veterinary pharmacy. One-half course. 30 hours. Spring,10:30; 26 M.

7. **Veterinary Therapeutics.** The same classification of drugs is used as in courses 5 and 6. The physiological and chemical action of each therapeutic agent, the dose and administration are considered. 60 hours. Winter, 11:30; 26 M.

8. **Veterinary Therapeutics.** Continuation of course 7. Two-thirds course. 40 hours. Spring, 11:30; 26 M.

22. **Toxicology.** In this course all poisonous drugs are considered and practical demonstrations are given with each drug. One-sixth course. 10 hours. Spring, 9:30; Dr. LUEDER, 22 M.

Medicine

Dr. WHIPPLE and Dr. ————

9. **Practice of Veterinary Medicine.** Instruction in this subject is begun in the second year with a thorough course in the technique of physical diagnosis. A free clinic is provided which supplies ample material. 60 hours. Fall, 10:30; Dr. WHIPPLE, 26 M.

10. Practice of Veterinary Medicine. Continuation of course 9. 60 hours. Spring, 9:30; Dr. WHIPPLE, 26 M.

11. Practice of Veterinary Medicine. Continuation of course 10. 60 hours. Fall, 10:30; Dr. WHIPPLE, 26 M.

12. Practice of Veterinary Medicine. Continuation of course 11. 60 hours. Spring, 11:30; Dr. WHIPPLE, 26 M,

16. Parasitology. External and internal parasites; their treatment. 60 hours. Fall, 11:30; ———

18. Laboratory Diagnosis. A laboratory study of the various phases of disease. Five-sixths course. 50 hours.
Winter, 9:30; ———

19. Urin Aanalysis. A laboratory course. One-sixth course, 10 hours. Winter, 9:30; ———

***36. Diseases of Domestic Animals.** For agricultural students.
Spring, hours to be arranged; Dr. WHIPPLE, 26 M.

34. Control of Infectious Diseases. One-third course. 20 hours. Spring, 11:30; ———

20. Lameness. The study of the typical foot, the anatomy, physiology, conformation, etc., of the foot and its contents and, as well, the structure of the limb. Five-sixths course. 50 hours. Spring, 8:30; Dr. WHIPPLE, 26 M.

21. Shoeing and Balancing. Study of normal and irregular feet, style of going, winter shoeing, hoof nurture, correction of defects in gait, and the methods of shoeing hoofs defective in form or diseased. One-sixth course. 10 hours.
Spring, 8:30; Dr. WHIPPLE, 26 M.

26. Examination for Soundness. Conformation of the horse with special reference to defects is considered in this course. One-third course. 20 hours. Spring, 1:30; Dr. WHIPPLE, 26 M.

27. Post-mortem Examinations. One-sixth course, 10 hours.
Spring, 10:30; ———

25. Obstetrics. This course considers all diseases of lower animals incident to reproduction; the nursing and care of young

during this period; prevention of diseases of breeding animals. Five-sixths course. 50 hours. Spring, 10:30; Dr. LUEDER, 26 M.

SURGERY.

Dr. ————

13. Principles and Practice of Surgery. General surgery, including surgical bacteriology, the pathology and treatment of inflammation, diseases of the bones, nerves, muscles, articulations, tendons, tendon sheaths and bursæ; methods of amputation and exarticulation, suturing and the general treatment of wounds; methods of anæsthesia; intravenous, and sub-cutaneous injections; castration; methods of restraint in securing animals, and methods of actual cautery. 60 hours. Fall, 11:30.

14. Continuation of course 13. 60 hours. Spring, 10:30.

15. Continuation of course 14. 60 hours. Fall, 9:30.

29. Surgical Restraint. Casting and tying and other means of restraint for domesticated animals; practice in manipulating the operating table and in placing animals in the stocks. One-half course. 30 hours. Spring, 11:30.

30. Dentistry. Study of the teeth; their preservation and extraction; dentition of young animals. One-third course. 20 hours. Spring, 11:30.

THE COLLEGE OF LAW.

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*

CHARLES E. HOGG, LL.D., *Dean and Professor of Common-Law Pleading and Court Practice*

WILLIAM P. WILLEY, A.B., A.M., *Professor of Equity Jurisprudence and Commercial Law*

J. RUSSELL TROTTER, A.M., PH.D., *Professor of Law*

URIAH BARNES, LL.B., *Assistant in Law*

HISTORY

The College of Law was established in 1878. Since then the growth of this department has kept pace with that of the University, of which it is a part, and now its attendance is comparatively large, having reached during the last year one hundred and eighteen students. The College of Law now occupies three commodious lecture rooms, a reading room, and a library, to which students have free access. In 1890 the moot court was introduced as a part of the regular law course.

LAW LIBRARY

The Law Library now contains about forty-five hundred volumes of well selected books. These consist of the official editions of the United States Supreme Court Reports, and the reports of the states of Massachusetts, New York, Pennsylvania Virginia and West Virginia complete, and all of the other states to the Reporter System complete with the exceptions of Maryland, South Carolina, Maine, Rhode Island, Deleware and New Hampshire. The Law Library also contains the American Decisions, American Reports,

Corporation Reports Annotated, Lawyers Reports Annotated, old and new series. American Probate Reports Annotated, and a large number of well selected text-books. It is in charge of a competent librarian and is open to the students of the University from eight a. m. to five p. m., and also from seven p. m. to nine p. m. In addition to this the Dean of the College of Law has placed his own library, consisting of nearly twenty-four hundred volumes, in his lecture room, to which the students have free access. This is a well kept, up-to-date private library, containing a large number of text-books, digests, encyclopedias and reports. There is a complete set of the Reporter System, state and federal, including those contained in the Dean's room and in the Law Library.

Arrangements have been made whereby the use of these two libraries is extended to the lawyers of the State by the payment of a small annual fee, the proceeds thus derived to be expended in the purchase of law books, as the property of the State.

COURSES OFFERED IN THE COLLEGE OF LAW

1. A course leading to the degree of Bachelor of Laws.
2. A course leading to the degree of Master of Laws.

ADMISSION

The requirements for the admission of students who are candidates for the degree of Bachelor of Laws, are fifteen units, obtained by examination or on certificate from a duly accredited secondary school.

Conditional Admission. Students who have not had opportunity to make the preparation required for admission may enter the Preparatory School of the University and complete their preparation. If a student lacks no more than one unit of the necessary preparation, he may be admitted conditionally, and complete his preparation while carrying on some of the studies of the first year of the law course.

Admission as Special Students. Persons desiring to enter as special students in the College of Law must conform to the regulations of the university concerning special students.

Master of Laws. To enter the course leading to the degree of Master of Laws the candidate must have received the degree of Bachelor of Laws from this university or from some other law school of equal grade.

DEGREES

BACHELOR OF LAWS

The degree of Bachelor of Laws will be conferred on any student who satisfies all entrance requirements and satisfactorily completes thirty courses in the College of Law or upon any student who satisfies all entrance requirements and satisfactorily completes eleven courses offered in the College of Arts and Sciences and twenty courses in the College of Law. Of the eleven courses offered in the College of Arts and Sciences the following are prescribed:

English	10 and 11
American history	22 and 23
English history	20

The professional courses required for the degree of Bachelor of Laws are all prescribed and must be taken in the order designated below unless special permission is obtained to vary that order. Students may however enter with advantage at the beginning of any quarter and obtain credit for the branches taught in that quarter.

A degree will not be granted to any student who has not been in actual attendance upon the lectures during the whole of the last year's work required for the degree.

DISTRIBUTION OF WORK IN THE COLLEGE OF LAW

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	Domestic relations 1	Insurance 5 1-2 Agency 4 1-2	
9:30	Contracts 2	Negotiable instruments 6	Torts 9
10:30		Real property 7	Real property 10
11:30	Criminal law 3	Criminal procedure 8	Evidence 11

Second Year

8:30			Sales 19
9:30	Corporations 12	Constitutional law 15 1-2 Partnership 16 1-2	Bailments and carriers 20

10:30	Common law pleading 13		Wills and administration of estates 21
11:30	Equity pleading and jurisprudence 14	Equity pleading and jurisprudence 17	
2:30		Court practice 18	Court practice 22

Third Year

8:30	Courts and officers 23		Corporations 29
9:30	Actions and suits 24	Legal documents 26	Federal proceedure 30, 1-2. Bankruptcy 31, 1-2.
11:30	Legal documents 25	Court proceedings 27	Court proceedings 32
2:30		Court practice 28	Court practice 33

MASTER OF LAWS

Candidates who present eleven courses in the College of Arts and Sciences and twenty courses in law in satisfaction of the requirements for the degree of Bachelor of Laws may offer the third year courses as scheduled above in satisfaction of the requirements for the degree of Master of Laws.

CREDIT TOWARDS THE DEGREE OF BACHELOR OF ARTS

The following courses in law may be counted toward the degree of Bachelor of Arts:

Domestic relations	1
Contracts	2
Criminal Law	3
Constitutional law	15
Wills and administration of estates	21

EXAMINATION FOR ADMISSION TO THE BAR

It is made the duty of the law faculty according to the laws of the state to examine all applications for admission to practice law. These examinations are held at the University on the first Wednesday after the first day of January, the first Wednesday in April, and the last Wednesday in September, in each year.

The examinations cover the branches taught in the first and sec-

ond years (the prescribed professional course) in the College of Law. The requirements for admission to these examinations are, that the applicant shall pay a fee of $5, and that he shall have studied law for two years either in private or at some law school, and shall have a good English education. Beginning with the year 1911, he shall have educational attainments equal to those usually offered in the standard high schools of this state, to be ascertained by the law faculty in such a manner as it may determine.

No student in the College of Law shall be admitted to any bar examination for the purpose of obtaining University credit for any course of law; except that, with the approval of the law faculty and the committee on classification and grades, a student who has been previously conditioned in a regular examination of the College of Law may be admitted to a bar examination in the same subject for the purpose of removing the condition.

With the approval of the instructor in charge, persons desiring admission to the bar may take the regular course examinations in the College of Law and receive for the examinations passed credit for the bar examination but no University credit will be given for such examinations.

COURSES OFFERED IN THE COLLEGE OF LAW

1. **Persons and Domestic Relations.** Elementary law; nature of laws in general; rules for construction of statutes. Nature of relative rights; essentials of valid marriage; rights and disabilities of husband and wife; antenuptial and postnuptial settlements; separation and divorce; legitimacy of children and legitimation of bastards; rights of parents and children and their respective duties; guardian and ward; infants, persons non compotes mentis and aliens; master and servant and their respective liabilities and rights as to each other and to third persons.

Fall, 8:30; Professor TROTTER, 28 W.

7. **Real Property.** First six weeks, concise course in the principles of real property under the common law as laid down by Blackstone in his Commentaries; last six weeks, the law of real property as found in Tiedeman's text-books; including the nature of real property; study of the different classes of estates with respect to quantity, time of enjoyment, and number of tenants.

Winter, 10:30; Dean HOGG, 27 W.

10. **Real Property.** Continuation of course 7. Uses and trusts, executory devises, requisites of a valid deed; method of acquiring

title, essentials of a valid will; title by adverse possession; prescription; and methods and forms of abstracting title to real estate.

Spring, 10:30; Dean HOGG, 27 W.

2. Contracts. A comprehensive course covering the whole subject of contracts in theory and practice. It deals minutely with all the essential elements in the formation of the contract, as well as the essentials to a valid discharge of its obligations.

Fall, 9:30; Professor WILLEY, 26 W.

20. Bailments and Carriers. The course covers all the various forms of bailments, but deals specifically with common carriers and their liability under all the conditions in which the passenger or shipper may seek to hold them responsible.

Spring, 9:30; Professor WILLEY, 28 W.

6. Negotiable Paper—Suretyship and Guaranty. A study of "The Negotiable Instruments Law" as adopted by West Virginia as a basis; together with a discussion of the principles governing negotiable paper and a demonstration of the practical application of these principles. This will be followed by a presentation of the nearly related subjects of suretyship and guaranty.

Winter, 9:30; Professor WILLEY, 26 W.

5. Insurance. History, nature and requisites of the contract; parties; insurable interest; the making of the contract; the consideration; consent of the parties; insurance agents and their powers; waiver and estoppel; rights under the policy; standard fire policy; terms of the life policy; marine insurance; accident insurance; guaranty, credit, and liability insurance. One-half course.

Winter, 8:30; Professor TROTTER, 28 W.

4. Agency. The relation of the principal and agent; the performance of the agent's power and the delegation thereof; determination of the agency; construction of authority; rights and liabilities between principal and third persons; rights and liabilities between agents and third persons; rights and liabilities between principal and agent. One-half course.

Winter, 8:30; Professor TROTTER, 28 W.

21. Wills and the Administration of Estates. The instrument —form and contents; execution—signing and attestation; general requisites and validity; mental capacity; undue influence; revocation, revival and republication; probate and contest; construction and

operation; legacies and devises; executors and administrators, their powers, duties, liabilities and compensation; distribution of the estates of decedents, including the payment of debts, legacies and distributive shares; settlement of estates.

Spring, 10:30; Professor WILLEY, 27 W.

19. **Sales.** The nature and formalities of the contract of sale; bargain and sale; contract to sell; acceptance and receipt; seller's duties—buyer's rights; buyer's duties—seller's rights.

Spring, 9:30; Professor TROTTER, 28 W.

16. **Partnership.** Purpose; partners; formation; incidents; rights and duties; powers; liability of firm; liability of partners; actions by and against firm; termination and dissolution; partnership assets; accounting; limited partnerships. One-half course.

Winter, 9:30; Professor TROTTER, 28 W.

11. **Evidence.** The subject of evidence is considered from two standpoints; first, the scientific method of searching for truth; secondly, the limitation for the production of evidence in a judicial inquiry.

Spring, 11:30; Professor WILLEY, 26 W.

3. **Criminal Law.** Definition, nature and punishment of crime; classification of crimes; the mental element in crime; persons capable of committing crimes, and exemptions from responsibility; parties concerned in the commission of crime; overt acts, attempts, solicitations, and conspiracy; offences against the person; against the habitation; against property; against public health, safety, comfort, and morals; against public justice and authority; against the pub'ic peace; against the government and the law of nations; jurisdiction and former jeopardy.

Fall, 11:30; Mr. BARNES, 28 W.

8. **Criminal Procedure.** Apprehension of persons and property; preliminary examination, bail, and commitment; the pleadings; the proof; trial and its incidents; proceedings after verdict; evidence.

Winter, 11:30; Mr. BARNES, 28 W.

9. **Torts.** Principles of liability; state, judicial, and executive acts; quasi judicial acts; parental and quasi parental authority; the remedies for torts; assault and battery, false imprisonment, injuries to family relations, defamation, fraud, malice, deceit, slander of title, malicious prosecution, etc.; duties regarding property, trespass, injuries to reversion, waste, conversion; injuries between tenants in

common, nuisance, negligence, etc.; special relations of contract and tort. Spring, 9:30; Mr. BARNES, 28 W.

14. Equity Jurisprudence. The origin and development of equity jurisprudence; the fundamental principles and maxims which constitute its foundation; the scope and limitation of its jurisdiction; the three principal divisions of equitable remedies, accident and mistake, fraud, and trusts; special jurisdiction, such as equitable liens, assignments, specific performance of contracts, and fiduciary obligations; reformation and cancellation of legal instruments, injunctions, etc. Fall and Winter, 11:30; Professor WILLEY, 26 W.

17. Equity Pleading. This course is to be taken in conjunction with course 14. The nature and object of pleadings in equity, the practical rules which are recognized by courts of equity in the United States, the modifications which have been made by statute in West Virginia, and the effect of the several pleadings in their relation to each other, are discussed. The aim is to cover the most practical part of the subject during the fall term, in order that the student may be ready for the work in court practice, which begins at the opening of the winter term.

Fall and Winter, 11:30; Professor WILLEY, 26 W.

12. Corporations. Definition and nature; creation and citizenship; effect of irregular incorporation; relation between the corporation and its promoters; powers and liabilities of corporations; relation to the state; dissolution; membership; management—officers and agents; rights and remedies of creditors; foreign corporations.

Fall, 9:30; Professor TROTTER, 28 W.

29. Corporations. The organization and management of private corporations; the draft of corporate charters, by-laws, and other corporate papers; method of conducting stockholders' and directors' meetings, and of the proceedings usually occurring at such meetings; general outline of the law of private corporations existing in West Virginia. Lectures and individual work in the law library. Spring, 9:30; Dean HOGG, 27 W.

15. Constitutional Law. Definition and general principles; the relation of the Federal Government to the states; establishment and amendment; construction and interpretation; the co-ordinate branches of government; federal executive; federal jurisdiction; powers of congress; executive, legislative, and judicial power in the states; the police power; power of taxation; the right of eminent

domain; civil rights and their protection; political and public rights; constitutional guaranties in criminal cases; laws impairing the obligations of contracts; retroactive laws. One-half course.

Winter, 9:30; Professor TROTTER, 28 W.

13. Common Law Pleading. The course covers the entire subject of common law pleading and the modifications produced by statute and the more liberal principles of modern procedure.

Fall, 10:30; Dean HOGG, 27 W.

23. Courts and Their Officers. Sources of judicial power; the Supreme Court of Appeals and its jurisdiction, original and appellate; the circuit courts and their jurisdiction, original and appellate; the county courts and their jurisdiction; inferior courts, including attorneys at law, their powers, duties and liabilities. Lectures and individual work in the law library.

Fall, 9:30; Dean HOGG, 27 W.

24. Actions at Law and Suits in Equity. Parties to actions and suits, in general; parties plaintiff and defendant, in various specific instances in actions ex contractu and ex delicto; joinder of parties, embracing nonjoinder and misjoinder and their consequences; proceedings by and against lunatics and infants; the nature and forms of actions; issuance, service and return of process; the rules; change of venue; removal of causes from a state to a federal court. Lectures and individual work in the law library.

Fall, 2:30; Dean HOGG, 27 W.

25. Legal Documents. The drawing and annotation of affidavits; apprenticeship forms; bonds; assignments; contracts; bills of lading and of sale; deeds of warranty, quit-claims, mortgages, deeds of trust, deeds of special commissioners and other persons holding a fiduciary character, and deeds of lease and release; mechanics' liens; notices; options; partnership papers; powers of attorney; promissory notes and other forms of security; protests; proxies; receipts; records and their authentication; wills and codicils thereto.

Fall, 11:30; Dean HOGG, 27 W.

26. Legal Documents. This is a continuation of course 25, and includes the draft of declarations, demurrers and pleas; bills in chancery, and answers thereto; court orders; and all other forms arising in the general practice of the law. The course also includes instructions and practice in the examination and abstracting of titles.

Winter, 9:30; Dean HOGG, 27 W.

27. Court Proceedings. Demurrer, its forms, kinds, office, effect, and the judgment thereon; pleas in abatement, their nature, form, filing, and the judgment thereon; pleas in bar, their nature, those of the general issue and special pleas; the issue, how and when made up, and how tried; abatement, revival and survival of actions; continuances; production of books, papers and documents generally upon the trial of an action. Winter, 11:30; Dean HOGG, 27 W.

32. Court Proceedings. This is a continuance of course 27, and includes admissibility of evidence; documentary evidence; expert evidence; witnesses; the jury; opening and closing the case; order of proof; objections and exceptions; examination, contradiction and impeachment of witnesses; arguments of counsel; instructions; special verdicts; special interrogatories; motion to set aside the verdict, and new trial; judgment and enforcement thereof; bills of exceptions; appellate court practice. Spring, 11:30; Dean HOGG, 27 W.

30. Federal Procedure. This course will embrace a consideration of the legal and equitable jurisdiction of the federal courts, and procedure therein at law and in equity from the institution of the suit to its termination, as well as many points of practice peculiarly applicable in these courts. Half course.

Spring, 9:30; Dean HOGG, 27 W.

31. Bankruptcy. This course will embrace a consideration of the bankruptcy act; courts of bankruptcy and their jurisdiction; the filing of the petition, voluntary and involuntary, and the steps necessary to an adjudication in bankruptcy; appointment of referees, their qualifications, oath of office, number, jurisdiction, duties and compensation; appointment of trustees, their qualifications, duties and compensation; creditors' meetings, and the various other steps usually taken in a bankruptcy case; as well as the usual forms in bankruptcy cases, including the petition, schedules, proof of claims, discharge of bankrupt, etc. One-half course.

Spring, 9:30; Dean HOGG, 27 W.

18. Court Practice. This course supplies the drill and discipline necessary to prepare the student for the trial tables. He is taught to apply legal remedies according to the common law and chancery systems of practice; to bring suits, draw papers, pleadings, briefs, etc.; to take the various steps incident to bringing a cause to trial, and to try it according to the rules of evidence, including the argument, charge, verdict, motion in arrest of judgment, writ of error. Appellate procedure is also included. The court is organized in all its details in strict conformity to the practice of the regular courts. Winter, 2:30; Dean HOGG, 27 W.

22. Court Practice. Continuation of preceding course.
Spring, 2:30; Dean HOGG, 27 W.

28. Court Practice. Continuation of preceding course.
Winter, 2:30; Dean HOGG, 27 W.

33. Court Practice. Continuation of preceding course.
Spring, 2:30; Dean HOGG, 27 W.

TEXT-BOOKS

The text-books used in the College of Law are carefully selected and are such as will be useful to the student throughout his professional career. They are all kept at the University, and sold to the student at a discount from the regular prices. They are as follows:

Blackstone's Commentaries
Clark on Contracts
Elliott on Insurance
Clark on Criminal Law
Clark on Criminal Procedure
Norton on Negotiable Paper
Hale on Bailments
Tiffany on Agency
Black's Constitutional Law
Shipman's Common Law Pleading
Shipman's Equity Pleading
Clark on Corporations
Eaton's Equity
Tiedeman on Real Property
Cooley on Torts
Greenleaf on Evidence
Burdick on Sales
Mechem on Partnership
Tiffany on Persons and Domestic Relations

For use in court practice on points of pleading and practice, for forms of orders, judgments, and decrees, and as books of general reference on the subjects of which they treat, the following have been adopted:

Hogg's Pleading and Forms (third edition)
Hogg's Equity Principles
Hogg's Equity Procedure
Hogg's Treatise and Forms
Willey's Procedure in the Courts of Law and Equity

THE COLLEGE OF MEDICINE

THE FACULTY

IN MORGANTOWN

DANIEL BOARDMAN PURINTON, LL.D., *President*

JOHN NATHAN SIMPSON, A.B., M.D., *Professor of Anatomy and Physiology and Head of the Medical Faculty*

ALEXANDER REID WHITEHILL, PH.D., *Professor of Chemistry*

ALBERT MOORE REESE, PH.D., *Professor of Zoology*

JOHN LEWIS SHELDON, PH.D., *Professor of Botany and Bacteriology*

JUSTIN FRANK GRANT, PH.B., M.D., *Professor of Anatomy and Pathology*

FREDERICK LAWRENCE KORTRIGHT, D.Sc., *Professor of Chemistry*

CHARLES EDGAR HOGG, LL.D., *Professor of Law*

IN BALTIMORE

The Faculty of the College of Physicians and Surgeons

FACILITIES FOR INSTRUCTION

Experience has shown that a university which possesses laboratories well equipped for scientific work, offers opportunities to medical students superior to those offered by a medical school separate from a university. It has also been shown that the studies of the first two

years of the medical course, which consist of non-technical science work, are pursued to much better advantage in the atmosphere of scientific research which prevails at a university. For these reasons the University offers the first two years of the medical course under such conditions that the student may take the technical courses and clinical work at some of the medical schools in large cities where the best hospital facilities are provided. For the first two years' work all the facilities of the laboratories of the University are open to medical students. This, together with the low cost of tuition and living, and the opportunities for general culture, places the student in the most desirable conditions for the study of medicine.

Under the anatomical law, there is supplied an abundance of material for dissection, and no expense is spared to secure the best material for the study of histology, embryology, bacteriology, pathology, etc. In the laboratories, each student has the use of a separate microscope and all the necessary apparatus and materials are placed in the hands of the student, so that he may learn their use for himself.

In the library there is a large collection of the best medical text and reference books, which is constantly being increased. The libraries of the allied scientific departments contain the most important books and current publications.

THE COMBINED SCIENTIFIC AND MEDICAL COURSE

This course is intended to give the student a thorough training in culture and science studies as a preparation for the study of medicine. This plan enables the student to secure the B.S. and M.D. degrees in six years. The whole trend of medical education in recent years has been toward the adoption of such a course as the most desirable in every way for the future practitioner.

REQUIREMENTS FOR ADMISSION

The requirements for admission to this course are the same as for admission to the course leading to the degree of Bachelor of Science in the College of Arts and Sciences (see page 55.) It is strongly recommended that the student shall present for entrance two years of French or German, or two years of laboratory science (physics, chemistry, botany, zoology).

COURSES OF STUDY

The student will register as a candidate for the B.S. degree and

will take as his major subject one of the sciences prescribed in the course. He will pursue his course in accordance with the rules governing students in the College of Arts and Sciences. When he shall have completed the following course of study, he will be granted the degree of Bachelor of Science, and after he has successfully completed the prescribed medical course in an approved medical college, he may have conferred upon him the degree of Doctor of Medicine from this University.

DISTRIBUTION OF WORK FOR THE B.S. AND M.D. DEGREES

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	Zoology 1	Zoology 2	Zoology 3
9:30	German 1 or French 1	German 2 or French 2	German 3 or French 3
10:30	English 10	English 11	
11:30	Solid geometry 7	Univ. algebra 8	Plane Trigonometry 9

Second Year

8:30	German 4 or elective	German 5 or elective	German 6 or elective
9:30	French 1 or elective	French 2 or elective	French 3 or elective
10:30	Zoology 6	Zoology 7	Zoology 8
11:30	French 4 or Chemistry 1	French 5 or Chemistry 2	French 6 or Chemistry 3

(Either German 4, 5, and 6, or French 4, 5, and 6 are to be taken.)

Third Year

8:30	Physiology 3	Physiology 4	Physiology 5
9:30	Elective	Physiology 6	Pharmacology 1
10:30	Embryology 6	Physiology 6 continued	Pharmacology lab.
11:30	Embryology 6 continued	Elective	Pharmacology lab. 3 days a week Neurology 14, 1-2, 2 days a week
1:30 to 4:00	Histology 1	Dissection 1	Dissection 2, 1-2, 6 weeks Neurology lab., 6 weeks

Fourth Year

8:30 – 9:30	Bacteriology 4 Pharmacol. 2	Pathology 2	Pathology 3
10:30 – 11:30	Chemistry 11	Chemistry 12	Chemistry 13
1:30 to 4:00	Bacteriology lab.	Dissection 3	Dissection 4, 1-2, 6 weeks Physical diagnosis, 1-2, 6 weeks Medical jurisprudence

THE FOUR-YEAR MEDICAL COURSE

This course is designed to meet the needs of those who can spend only four years on their medical course. Although students are earnestly advised to take the six-year course, the shorter course is arranged to give the best possible training in the time at the student's command.

THE COLLEGE OF PHYSICIANS AND SURGEONS.

By affiliation with the College of Physicians and Surgeons in Baltimore, the laboratory courses constituting the first two years of the medical course may be done in Morgantown and the clinical work of the third and fourth years will be done in Baltimore. Students go from their work in Morgantown to Baltimore without further examination.

The College of Physicians and Surgeons is one of the best equipped medical schools in the East, and numbers among its alumni some of the foremost practitioners of our state. The college is in its thirty-fifth year. Its buildings are thoroughly adapted to all the requirements of a modern medical school. Its clinics are very large and varied, and its faculty includes some of the most prominent men in Baltimore.

Clinical facilities are furnished by the Mercy Hospital, the Hospitals for the Colored Race, the Bay View Hospital (with two thousand beds), the Nursery and Child's Hospital, the Lying-in Hospital, and the City Hospital Dispensary, where 25,000 patients are treated annually. The College also conducts a Pasteur Institute for the treatment of hydrophobia.

Students who take the first two years' work of the medical course in Morgantown will, upon completing the course, receive their diploma from the College of Physicians and Surgeons, but the degree will also be conferred at Morgantown, and the students will be considered alumni of West Virginia University.

THE WOMAN'S MEDICAL COLLEGE.

Arrangements upon the same terms as those above described have been made with the Woman's Medical College of Baltimore, so that women who take their first two years' work in this University may complete the course in Baltimore.

REQUIREMENTS FOR ADMISSION

Candidates for admission to the four-year course in the College of Medicine must have credit for fifteen units obtained by examination or on certificate from a duly accredited secondary school and in addition thereto must have credit for ten courses in the College of Arts and Sciences or their equivalent.

The fifteen units of secondary work must include the following:

	Units
Foreign language (one year must be in Latin)	3
Mathematics (algebra and plane geometry)	2
English	2
History	1
Science (physics, chemistry, botany, zoology, with laboratory)	2
Elective in language, literature, history, or science	5
Total	15

The courses required in the College of Arts and Sciences must include the following courses unless they have been already taken as part of the fifteen units above mentioned.

Chemistry 1, 2, and 3.
Physics 1 and 2.
Zoology 1, 2, and 3
Botany 1

CONDITIONAL ADMISSION

Students who have not had opportunity to make the prepara-

tion required for admission may enter the Preparatory School of the University and complete their preparation. If a student lacks no more than three courses of the necessary preparation, he may be admitted conditionally, and complete his preparation while carrying on some of the studies of the first year of the medical course. No student may enter any course of the second year until all preparatory conditions have been removed.

DISTRIBUTION OF WORK FOR FOUR-YEAR MEDICAL STUDENTS

First Year

Hour	*Fall*	*Winter*	*Spring*
8:30	Physiology 3	Physiology 4	Physiology 5
9:30	Elective	Physiology 6	Pharmacology 1
10:30	Embryology 6	Physiology 6 Continued	Pharmacology lab.
11:30	Embryology 6 continued	Elective	Pharmacology lab., 3 days a week Neurology, 14, 1-2, 2 days a week
1:30 to 4:00	Histology 1	Dissection 1	Dissection 2, 1-2, 6 weeks Neurology lab., 6 weeks

Second Year

8:30	Bacteriology 4		
9:30	Pharmacology	Pathology 2	Pathology 3
10:30			
11:30	Chemistry 11	Chemistry 12	Chemistry 13
1:30 to 4:00	Bacteriology	Dissection 3	Dissection 4, 1-2, 6 weeks Physical diag., 1-2, 6 weeks. Med. jurisprudence

Third Year, Given in Baltimore

Surgery, Obstetrics, Gynecology, Medicine, Pediatrics, Therapeutics, Diseases of nervous system, Diseases of eye and ear, of stomach, Dermatology, Physical diagnosis, Genito-urinary surgery, Surgical anatomy, Disease of nose and throat, Diseases of blood and urine.

Fourth Year, Given in Baltimore

Surgery, Orthopedic surgery, Operative surgery, Rectal surgery, Medicine, Obstetrics, Gynecology, Hygiene, Mental diseases, Genito-urinary surgery, Pediatrics, Nose and throat, Diseases of nervous system, Diseases of stomach, eye, and ear.

COURSES FOR PHYSICIANS

Any of the courses offered in the College of Medicine are open to physicians upon the payment of the same fees as other students. Special courses in dissecting, bacteriology, and pathology will be arranged when there is sufficient demand for them.

FEES

A fee of five dollars will be deposited by each student taking a course in gross anatomy to cover possible loss of materials lent to students for study at their rooms. Whatever remains of the fee will be returned at the close of the year.

The following fees are charged to cover cost of materials used:

$1.00 per course in histology
$3.00 per course in bacteriology
$5.00 for each part dissected in anatomy
$3.00 per course in embryology
$3.00 per course in pathology
$2.00 per quarter in general chemistry
$10.00 per quarter in medical organic chemistry

DEPARTMENTS OF INSTRUCTION

For the announcement of the full course in medicine students are referred to the catalogues of the College of Physicians and Surgeons of Baltimore. The following is the announcement of the work offered in Morgantown.

ANATOMY

Professor GRANT

1. **Dissection.** Careful dissection of the body with reference to nerves, blood vessels, and muscles. The cadaver is divided into three parts, each student dissecting an arm, a leg, including the abdominal viscera, and the head, including the thoracic viscera. For each part a fee of five dollars is charged.

Winter, Anatomical Laboratory.

2. **Dissection.** Continuation of course 2.

Spring, Anatomical Laboratory.

3. **Dissection and Quizes.** Continuation of course 3.

Winter, 1:30—4:00 p. m.; Anatomical Laboratory.

4. **Dissection and Quizes.** Continuation of course 4.

Spring, 1:30—4:00 p. m.; Anatomical Laboratory.

CHEMISTRY

Professor WHITEHILL and Professor KORTRIGHT

1. **Inorganic Chemistry.** Experimental lectures, laboratory work, and recitations.

Fall, first section, 9:30; second section, 11:30; Spring, 10:30; Professor WHITEHILL, 20 S.

2. **Inorganic Chemistry.**

Winter, first section, 9:30; second section, 11:30; Fall, 10:30; Professor WHITEHILL, 20 S.

3. **Organic Chemistry.** Lectures, laboratory work, and recitations,

Spring, first section, 9:30; second section 11:30; Professor WHITEHILL, 20 S.

On Monday afternoons during the Winter and Spring terms a special laboratory course is given to accompany courses 1, 2, 3. Hours 1:30 to 4:00.

11. **Organic Chemistry.** A lecture and laboratory course in special subjects of organic chemistry, as carbohydrates, fats, proteids, and foods in general. Prerequisite, Chemistry 3.

Fall, 10:30-12:30; Professor KORTRIGHT, 21 S.

12. Organic Chemistry. A continuation of course 11. Studies in digestion and metabolism.

Winter, 10:30-12:30; Professor KORTRIGHT, 21 S.

13. Medical Analysis. The study and practice of the analytical methods used in modern medicine.

Spring, 10:30-12:30; Professor KORTRIGHT, 21 S.

EMBRYOLOGY AND COMPARATIVE ANATOMY.

Professor REESE and assistant

Students who elect embryology and comparative anatomy as the major subject in candidacy for the B.S. degree will be expected to take course 9 in the second year. Course 1 is prerequisite to all other courses except course 14.

1. Animal Biology. Three lectures and four hours' laboratory work per week.

Fall, Monday, Wednesday, and Friday, 8:30; Laboratory, Tuesdays and Wednesdays, 1:30; 17 W.

2. Vertebrate Zoology.

Winter, Monday and Wednesday, 8:30; Tuesday, Wednesday, and Thursday, 1:30; 17 W.

3. Vertebrate Zoology. Continuation of course 2.

Spring, Monday and Wednesday, 8:30; Tuesday, Wednesday, and Thursday, 1:30; 17 W.

6. Vertebrate Embryology. Prerequisite, courses 2 and 3.

Fall, 10:30-12-30; 17 W.

7. Vertebrate Neurology. Prerequisite, course 1, 2, 3, and 6

Spring, hours to be arranged; 17 W.

9. Methods in Embryology, Histology and Neurology.

Hours to be arranged; 17 W.

14. The Human Brain. A short course open only to four-year medical students. Lectures twice a week; laboratory work afternoons during the second half of the spring quarter.

Spring, 11:30; 17 W.

The above courses are more fully described in the announcement of Zoology in the College of Arts and Sciences, page 110.

MEDICAL BACTERIOLOGY

Professor SHELDON

4. Bacteriology. This is a practical laboratory course supplemented by lectures and recitations. Eeach student will become familiar with methods of sterilization and disinfection, the operation and use of culture media, the morphology and life history of the more important non-pathogenic and pathogenic bacteria and the pathogenic protozoa, and the bacterial analysis of air, soil, water, and milk.

Fall, lectures and recitations, 8:30; laboratory work, 1:30; 1 W.

PHYSIOLOGY

Professor SIMPSON

1. Physiology. The organs of the body are studied both in their gross anatomy and in their microscopical structure. Animal demonstrations are used to illustrate the function of different organs. Fall, 11:30; W.

2. Physiology. Continuation of course 1. Winter, 11:30; W.

3. Medical Physiology. Muscles, nerves, and special senses. Lectures and recitations, with demonstrations on animals and with models. Text book, Howell. Fall, 8:30; W.

4. Medical Physiology. Continuation of course 3. . The eye and other special senses; blood, lymph, and circulation. Text book, Howell. Winter, 9:30; W.

5. Medical Physiology. Continuation of course 4. Respiration; secretion; digestion; excretory organs; nutrition, heat production, and regulation; reproductive organs.

Spring, 8:30; W.

6. Medical Physiology. Laboratory course accompanying course 4. Individual experiments with muscles of frogs and terrapin showing elasticity, effect of varying strength of electric currents, fatigue, electrotonus, effect of temperature on muscle contraction; tonometer experiments with terrapin hearts; pulse velocity; blood pressure and respiration. Winter, 9:30 to 11:30; W.

PHARMACOLOGY

Professor SIMPSON

1. **Pharmacology.** Crude drugs, their origin, preparation, and dosage. Laboratory work covering the preparation of the more common pharmaceutical preparation such as fluid extracts, tinctures, ointments, pills, etc.; writing of prescriptions; testing the actions of drugs on animals.

Spring, recitations at 9:30; laboratory 10:30 to 12:30, Monday, Wednesday, and Friday; 10:30 to 11:30, Tuesday and Thursday; W.

2. **Pharmacology.** Continuation of course 1. Lectures, recitations, and demonstrations. Text book, Sollman.

Fall; 9:30; W.

MEDICAL JURISPRUDENCE

Professor HOGG

A course of eighteen lectures, covering the medico-legal aspect of medicine. Open to medical and law students.

Spring, hours to be arranged.

MICROSCOPIC ANATOMY

Professor GRANT

1. **Normal Histology.** A microscopic study of the different organs and tissues of the human body and of animals.

Fall, 1:30 to 4:00; S. F.

2. **Pathology.** Gross and microscopic study of diseased tissue, organs and new growths; the more common tumors. Prerequisite, Anatomy 1 and Medical bacteriology. Winter, 8:30 to 10:30; 1 W.

3. **Pathology.** Continuation of course 2. Spring, 8:30 to 10:30; 1 W.

PHYSICAL DIAGNOSIS

Professor SIMPSON

This is a six weeks' course in regional anatomy designed to acquaint the student with methods of examining patients.

Spring, hours to be arranged; 1 W.

TEXT-BOOKS

Anatomy, Gray or Morris
Histology, Piersol or Boehm-Davidhoff-Huber
Embryology, Reese
Physiology, Howell
Chemistry, Remsen
Bacteriology, Muir and Ritchie, Frost
Pathology, Delafield and Prudden, McFarland, Green-Bosquet
Pharmacology, Sollman, H. C. Wood
Physiological Chemistry, Simon
Dictionaries, Dorland, Gould

THE DEPARTMENT OF MILLITARY SCIENCE AND TACTICS.

THE FACULTY

DANIEL BOARDMAN PURINTON. LL.D., *President*

HARRY A. EATON, Captain 23rd U. S. Infantry, *Commandant of Cadets and Professor of Military Science and Tactics*

THE CADET CORPS

Extracts from the Military Law, State of West Virginia, 1901, sec. 100:—"The Corps of Cadets of the West Virginia University shall be held as the Training School of the West Virginia National Guard, subject to such duty as the Commander-in-chief may order."

Jan. 19, 1903:—"Each member of the Senate shall be entitled to appoint one cadet from his district, on or before the first day of June in the second year of his term, and one cadet on or before the first day of June in the fourth year of his term. Each member of the House of Delegates shall be entitled to appoint one cadet from his county on or before the first day of June next preceding the end of his term. In case a cadetship filled by appointment by any member of the Legislature shall become vacant, the member making the appointment, or his successor, shall fill the same by a new appointment within the limits of the time aforesaid. But no Senator or Delegate shall appoint any cadet until he receives a certificate from the President of the University, or the Commandant of Cadets, giving him notice of his right to do so; and he shall not have the right to exercise such power of appointment as long as two cadets are accredited to himself and his predecessor, either by original appointment or by re-enlistment. All other cadets necessary to make up the full complement of the corps shall be appointed by the regents, in proportion to their number, including vacancies, if

any, caused by the failure of any member of the Legislature to fill his appointment. Cadets shall not be under sixteen years of age, and shall not be over twenty-two years of age. Their appointment shall be made upon undoubted evidence of good moral character and sound physical condition. Their term of enlistment shall be four years, but any cadet, at the expiration of his first term, shall be entitled to re-enlist for further term of two years, upon giving notice of his intention to the commandant of Cadets at least thirty days before the expiration of such term. But not more than fifteen cadets shall be appointed from any Senatorial district, and not more than eight from any one county."

State cadets to the number of 225 are appointed to the University, and receive their uniforms, books, stationery, tuition, use of library, use of arms and equipments, and ammunition for target practice, free. They constitute the public guard of the University and of the public property belonging thereto. Application for an appointment should be made to one of the regents of the University or to a member of the Legislature.

Students of the University who desire military instruction, and who are not state cadets, are allowed to join the corps as volunteer cadets. They receive no uniform from the state.

All cadets are required to wear a neat-appearing gray uniform at drill. This uniform may be worn with propriety on all occasions.

An officer of the regular army is specially detailed by the President of the United States to act as Commandant of Cadets. The inspection of the cadet corps is made by an officer of the General Staff of the Army.

SPECIAL REWARDS FOR MILITARY EXCELLENCE

The names of the three most distinguished cadets of the graduating class are published annually in the Army Register. One of these three may be designated each year to take the examination for commission in the Regular Army.

All graduates of the Military Department are eligible, within five years after graduation, to commissions as first lieutenant in the West Virginia National Guard, without examination.

ARMORY

The Armory (60 by 120 feet) is used as a drill hall during inclement weather. This building is the home of the cadet corps, and all entertainments given by them are held therein, under the supervision of the Commandant of Cadets.

ADMINISTRATION AND INSTRUCTION

For the purpose of administration and drill the cadet corps is organized as an infantry battalion.

Cadets are divided into sections, corresponding to their military proficiency and length of service. New cadets are required to enter the fourth (lowest) section, but those who have had previous military instruction may be transferred to a higher section upon passing a satisfactory examination.

The work in the Military Department is taken in connection with other University work, and requires about four hours each week. The course of instruction is intended to fit all who graduate therein to perform efficiently the duties of officers in the National Guard of West Virginia. In addition to technical knowledge, the cadets are taught patriotism, punctuality, obedience, attention, alertness, and neatness, qualities which go toward making a good citizen as well as a good officer. The winter quarter is devoted to theoretical instruction in tactics and other military subjects, together with practical instruction in drill and in gymnastics. A course of lectures in military hygiene is also given.

Infractions of discipline are referred to a court-martial, consisting of cadet officers.

PHYSICAL TRAINING

The regular course in physical training occupies four years, and is required of all members of the cadet corps unless excused for sufficient reasons.

A regulation suit is required. This suit consists of a black quarter-sleeve jersey, white track pants, long black stockings, and white gymnasium shoes.

COURSE OF INSTRUCTION

The instruction of the various sections is as follows:

Fourth Section

Practical Instruction: (a) Infantry drills in school of the soldier, squad, company, and battalion; extended order and ceremonies. (b) Guard duty as a sentinel. (e) Physical training in the gymnasium.

Theoretical Instruction: (a) Infantry Drill Regulations, paragraphs 1 to 248, and 502 to 601, inclusive. (b) The Manual of

Guard Duty except paragraphs 331 to 373, inclusive. (c) The explanation of Cadet Regulation and General Orders, and the care of arms and accoutrements.

Third Section

Practical Instruction: (a) Infantry drills, same as fourth section, except in school of the soldier. (b) Guard duty as sentinels and non-commissioned officers of the guard. (c) Physical training in the gymnasium.

Theoretical Instruction: (a) Infantry Drill Regulations. (b) Manual of Guard Duty.

Second Section

Practical Instruction: (a) Infantry drills, same as third section. (b) Small Arms firing, including the position and aiming drills, gallery practice, and range firing. (c) Guard duty, same as third section.

Theoretical Instruction: (a) Infantry Drill Regulations. (b) Small Arms Firing Regulations. (c) U. S. Army Regulations.

First Section

Practical Instruction: (a) Infantry—duties of grade attained. (b) Guard duty—of grade attained. (c) Courts-martial. (d) Fencing.

Theoretical Instruction. (a) Field Service Regulations. (b) Minor Tactics, including advance and rear guards, marches, fortifications, camping, etc. (c) Military Law.

BAND

A band of thirty-two musicians is authorized by the Board of Regents. Band cadets are volunteer cadets. They receive the same allowances as state cadets and are governed by the same rules and regulations. They receive free of charge, tuition, uniform, books, stationery, and instruction in band music. They are exempt from gymnasium work. They are required to be instructed in military drill to include the school of the soldier and of the squad.

INFORMATION FOR APPLICANTS FOR APPOINTMENT TO THE CADET CORPS

1. The applicant must not be under sixteen nor over twenty-two years of age.

2. He must be a bona fide resident of West Virginia.

3. He must be sound physically, of good moral character, and able to pursue successfully the studies of the first year of the Preparatory School.

4. He must make a deposit of $20.00 with the treasurer of the University as a guaranty that the state arms, etc., in his possession will be taken care of. The deposit will be returned to him at the end of his enlistment of two years, upon satisfactory settlement with the quartermaster.

5. He must make an average grade each term of not less than sixty on a scale of one hundred, in order to hold his appointment.

6. Cadets are furnished with uniforms, text-books, and stationery free of charge. They pay no matriculation, tuition, or contingent fees to the University. If they are graduated from any department of the University while members of the cadet corps, they are allowed to retain their text-books.

7. The work of the corps does not interfere with the student's scholastic duties. Cadets may take courses in any of the departments of the University.

8. A young man desiring an appointment should apply to the regent for his county, or to a member of the Legislature representing his county. The counties of the state are divided as follows by the Board of Regents for the purpose of cadet appointments:

REGENT J. B. FINLEY, Parkersburg, W. Va
Brooke, Doddridge, Hancock, Marshall, Ohio, Pleasants, Ritchie, Tyler, Wetzel, Wirt, and Wood.

REGENT G. S. LAIDLEY, Charleston, W. Va.
Boone, Clay, Fayette, Greenbrier, Kanawha, Mercer, Monroe, Nicholas, Raleigh, Summers, and Wyoming.

REGENT M. C. LOUGH, Fairmont, W. Va.
Barbour, Braxton, Gilmer, Harrison, Lewis, Marion, Monongalia, Preston, Taylor, Upshur, and Webster.

REGENT G. A. NORTHCOTT, Huntington, W. Va.
Cabell, Calhoun, Jackson, Lincoln, Logan, Mason, Mingo, McDowell, Putnam, Roane, and Wayne.

REGENT M. P. SHAWKEY, Charleston, W. Va.
Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, Pendleton, Pocahontas, Randolph, and Tucker.

9. Students who have cadet appointments should upon their arrival at the University present themselves at the office of the Commandant, in the armory, and obtain the necessary information about registering, etc.

MILITARY GRADUATES AND DISTINGUISHED CADETS

Reported at Commencement, June, 1909

The following are the distinguished graduates, whose names have been reported to the War Department:

Cadet Captain Hugh C. Barnes, Co. B.
Cadet 1st Lieut, Boyd C. Randall, Co. A.
Cadet 1st Lieut. George W. Grow, Staff.

The following are the distinguished cadets:

Second Section

Cadet Chief Trumpeter Enoch Smith, N. C. S.,
Cadet Q. M. Sergeant Carl R. Sydenstricker, N. C. S.
Cadet Ord. Sergeant Homer A. Hoskins, N. C. S.

Third Section

Cadet Sergeant Harmon H. Kerr, Co. B,
Cadet Corporal Jesse J. Jenkins, Co. B,
Cadet Sergeant Neal M. Heflin, Co. B.

Fourth Section

Cadet Private Fred G. Reppert, Co. A,
Cadet Private Milton DeW. Fisher, Co. A,
Cadet Private Forrest P. Coombs, Co. B.

The following named cadets having completed the prescribed course of instruction in the Department of Military Science and Tactics, are announced as graduates from that Department:

Hugh C. Barnes,	Boyd Randall,
George W. Grow,	Oscar F. Gibbs,
John C. Evans,	Claude S. Tetrick,
Davis H. Estill,	Thomas L. Harris,

Walter B. King.

Upon decision of the Board of Judges, the Cadet Colors for the ensuing year were awarded to Co. A.

The medals offered by the Board of Regents were awarded as follows:

(1) The gold medal for drill and discipline, to Cadet Sergeant Harmon H. Kerr, Co. B.

(2) The silver medal for the best aggregate score at target practice, to Cadet Chief Trumpeter Enoch Smith, N. C. S.

(3) The silver medal for second best aggregate score at target practice, to Cadet Sergeant Lawrence E. Sydenstricker, Co. A.

The sabre and belt offered by S. D. Hirschman & Co., to the Captain of the best drilled company was awarded to Cadet Captain Oscar F. Gibbs, Co. B.

ROSTER OF CORPS OF CADETS

Harry A. Eaton,	Captain 23rd U. S. Infantry, Commandant
Henry St. Clair,	Ordnance Sergeant, U. S. A., Armorer

FIELD AND STAFF

John C. Evans,	Cadet Major
John N. Simpson,	Captain, Surgeon
Charles G. Baker,	Cadet 1st Lieutenant, Adjutant
Harry G. Wheat,	Cadet 1st Lieutenant, Quartermaster

NON-COMMISSIONED STAFF

Harmon H. Kerr,	Cadet Sergeant Major
Eugene L. Colcord,	Cadet Quartermaster Sergeant
Howard C. Riggs,	Cadet Ordnance Sergeant
Enoch Smith,	Cadet Chief Trumpeter

BAND

Walter A, Mestrezat,	Chief Musician
Thomas C. Pitzer,	Cadet Principal Musician

Cadet Sergeants

George G. Crewson,	Homer B. Hinds,
Harry L. Stilphen,	Julius H. Hefke,

Cadet Corporals

Lee F. Everhart,	Benjamin H. Moffatt,
Raymond J. Stockhammer,	William E. Muldoon,
Arthur L. Frye,	John H. Beaumont,
Constantine G. Psaki,	John Ritter.

COMPANY "A"

George W. Grow,	Cadet Captain
Neal M. Heflin,	Cadet 1st Lieutenant
Homer A. Hoskins,	Cadet 2nd Lieutenant
Wilbur E. Cather,	Cadet 1st Sergeant

Cadet Sergeants

J. C. Allen,
Eugene E. Evans,
Lewis G. Burrell,
Milton DeW. Fisher,

Cadet Corporals

Artie R. Groves,
Karl H. Gorman.

Cadet Musician

Fred G. Reppert

COMPANY "B"

Claude S. Tetrick,	Cadet Captain
Walter W. Point, Jr.	Cadet 1st Lieutenant
John L. Robinson,	Cadet 2nd Lieutenant
Frank V. Sander,	Cadet 1st Sergeant

Cadet Sergeants

Forrest P. Coombs,
Stephen P. Hoskins,
Leonard J. Bernstein,
Hugh G. Fortney,

Cadet Corporals

Harold P. Tompkins,
Francis F. Cooper,
Allan B. Lamdin.

Cadet Musician

Jackson V. Blair

DEGREES, DIPLOMAS AND PRIZES

Forty-second Annual Commencement, June 16, 1909

CANDIDATES FOR DEGREES

Master of Arts

William Michael Baumgartner, — Elk Lick, Pa.
A.B., West Virginia University, 1903

Maud Fulcher Callahan, — Morgantown
A.B., West Virginia University, 1908

Charles Henry Ebers, — Wheeling
A.B., West Virginia University, 1900

Clifford Renwar Myers, — Mason
A.B., West Virginia University, 1907

Aretas Wilbur Nolan, — Morgantown
A.B., Indiana University, 1905

John Nuzum, — Grafton
A.B., West Virginia University, 1894

Electrical Engineer

Alexander Hardy Foreman, — Grafton
B.S.M.E., West Virginia University, 1906 [as of 1908]

James Scott Murphy, — Morgantown
B.S.M.E., West Virginia University, 1905

Mechanical Engineer

Lloyd Blaine Selby, — Morgantown
B.S.M.E., West Virginia University, 1908

Bachelor of Arts

Sirus Orestes Bond, — Lost Creek
James Henry Callison, — Aberdeen, Wash.
Leo Carlin, — Smithfield
Crystal Courtney, — Morgantown
Carrie Maude Dague, — Viola
Lorena Mabel Lee Fries, — Berkeley Springs
Edward Rutherford Grose, — Sago
Flora Ray Hayes, — Morgantown

Bachelor of Arts—Continued

WARREN HAMPTON HODGES,	Morgantown
BROOKS SWEARENGEN HUTCHINSON.	Fairmont
FRANCES FLORENCE JACKSON,	New Haven
BENJAMIN WALTER KING,	McMechen
ADA MOON,	Morgantown
SUSAN MAXWELL MOORE,	Morgantown
PAUL REED MORROW,	Huntington
ADA MAY NEAL,	Parkersburg
VIRGINIA BRANSFORD NEAL,	Parkersburg
BOYD RANDAL,	Martinsburg
DAVID BRIGHT REGER,	Buckhannon
GERTRUDE ROBERTS,	Wheeling
LAKIN FISKE ROBERTS,	Grafton
JACOB FRANCIS SHREVE,	Burchfield
LILLIAN BALLARD SMITH,	Charleston
MABEL STOUT,	Clarksburg
MAE BURNICE SULLIVAN,	Huntington
CYRUS BIGGS VAN BIBBER,	Huntington

Bachelor of Science

JAMES WILSON FERRELL,	Belington
ROSA FOLAU,	Clarksburg
ARCHIE CARLTON WEAVER,	Morgantown

Bachelor of Laws

ROY OLNEY HALL,	Grafton
JOHN WILLIAM MASON, JR.,	Fairmont.
A.B., West Virginia University, 1908	
FRENCH MCCRAY,	Fairmont

Bachelor of Science in Civil Engineering

GEORGE KARL ALLMAN,	Lorentz
A.B., West Virginia University, 1908	
LLOYD SUTTON BACKMAN,	Cleves, Ohio
CLYDE MORTIMER BENNETT,	Morgantown
JOHN WOTRING HALL,	Keyser
JULIUS BYRON HEADLEY,	Brock, Pa.
HERMAN CHARLES KOELZ,	Keyser
ARTHUR MAPEL LUCAS,	Morgantown
HARRIS AQUILLA REYNOLDS,	West Newton, Pa.

JOHN MANNING RUSSELL,	Loveville, Md.
HALLECK MCGINNIS SCOTT,	Beckley
HUBERT EARL SNYDER,	Sharpsburg, Md.
CLEOPHUS SWECKER,	Century
CLARENCE EUSTACE TRACY, [as of 1908]	Alderson

Bachelor of Science in Mechanical Engineering

HUGH COOPER BARNES,	Fairmont
THOMAS WITT FITZGERALD,	Huntington
JOHN BEHNY GRUMBEIN,	Lebanon, Pa.
LEROY PARK HOLLOWAY,	Columbiana, Ohio
JOHN PERKINS MCJILTON,	Sleepy Creek
CREED COLLINS SHEPPARD,	Walton

Bachelor of Science in Agriculture

TIMOTHY JAMES MCCARTHY,	Mannington

Bachelor of Agriculture

PORTER WALLACE POST, [as of 1907]	Jane Lew

Doctor of Medicine

JAMES GEORGE CALLISON,	Huntington
ARTHUR CLYDE KNIGHT,	Mt. Clare
JEROME ALFRED RIFFE,	Hinton
AMOS ELBRIDGE SMITH,	Walkersville

Diploma of Graduation in Law

RALF WINEBRENNER BORDER,	Kearneysville
CECIL LLEWELLYN CRICKARD,	Huttonsville
RAFAEL MARIA CUEVAS ZEQUEIRA,	Luquillo, P. R.
CHARLES WILKERSON FREEMAN,	Huntington
WILLIAM GAIL HAMILTON,	Wellsburg
EDWARD MAYWOOD HINERMAN,	Moundsville
HOWARD HARWOOD HOLT,	Grafton
EDWARD FRED HORSTMAN,	Wheeling

BENJAMIN BASSEL JARVIS,	Clarksburg
HARRY LEE JONES,	Huntington
EARL LINSEY MAXWELL,	Elkins
HUBERT DAVID MAY,	Charleston
JAMES RICHARD WALTER MORRIS, JR.,	Moundsville
TREVEY NUTTER,	Fairmont
LACY BURKE O'NEAL,	Fayetteville
JAMES DEFORIS PARRIOTT,	Cameron
HARRY WILBUR SHEETS,	Lost Creek
AARON WINER,	Morgantown.

Diploma in Agriculture

EARL WOODDELL SHEETS,	Lost Creek

PRIZES AND HONORS

The Inter-Society Prizes

For the Parthenon Society:

Debate

HORANCE LABAN WHITE, Junior.....Canton

ROY OLNEY HALL, Senior Law.....Morgantown

For the Columbian Society:

Essay

MABEL STOUT, Senior .....Clarksburg

Oration

EDGAR BOYLE SPEER, Freshman.....Uniontown, Pa.

Declamation

MARGARET BRADFIELD HOPWOOD. Freshman.....Morgantown

Regents' Prize in Composition

JOSEPH COCHRAN VANCE, Junior.....Morgantown

James F. Thompson Prize

JAMES KUYKENDALL GUTHRIE, Freshman.....Romney

Tax Commission Prize

JOHN CHRISLER EVANS, Junior.....New Cumberland

Russell Love Morris Prize

CLARENCE EUSTACE TRACY, Senior.....Alderson

COMMENCEMENT AND CONVOCATION SPEAKERS

Commencement, June, 1909: Baccalaureate sermon, HUGH BLACK, Union Theological Seminary; Commencement address, WASHINGTON GLADDEN, D. D., Columbus, Ohio.

Summer School Convocation: EDWARD HOWARD GRIGGS, Montclair, N. J.

Fall Quarter Convocation: DANIEL DORCHESTER, JR., D. D., Pittsburg, Pa.

Winter Quarter Convocation: JOHN J. STEVENSON, New York University.

Spring Quarter Convocation: MERRILL E. GATES, Washington, D. C.

ALUMNI ASSOCIATIONS

GENERAL ASSOCIATION

President	GEORGE S. LAIDLEY, '76	Charleston, W. Va.
Vice-President	THOMAS E. HODGES. '82	Morgantown, W. Va.
Secretary-Treasurer	D. M. WILLIS, '99	Morgantown, W. Va.

Executive Committee

FRANK COX, (Chairman)	Morgantown
D. M. WILLIS,	Morgantown
C. R. JONES,	Morgantown
Miss NELL MORELAND,	Morgantown
Miss MARGARET BUCHANAN,	Morgantown
Mrs. J. M. CALLAHAN,	Morgantown
WALTER SOUTH,	Morgantown
Rev. H. G. STOETZER,	Fairmont
C. D. VAN BIBBER,	Kingwood
LEO LOEB,	Charleston
C. A. ELLISON,	Charleston
THOMAS E. HODGES,	Charleston
C. M. BABB,	Morgantown
R. L. MORRIS,	Morgantown

EASTERN PANHANDLE ALUMNI ASSOCIATION

President	H. H. EMMERT, '88	Martinsburg, W. Va.
Secretary	C. E. MARTIN, '99	Martinsburg, W. Va.

WEST VIRGINIA UNIVERSITY CLUB OF WESTERN PENNSYLVANIA

President	G. H. F. HOLY	Pittsburg, Penna.
Vice-President	F. G. ROSS	Pittsburg, Penna.
Secretary-Treasurer	F. J. STONE	Pittsburg, Penna.

Executive Committee

F. G. ROSS G. H. F. HOLY F. J. STONE
J. N. CALVERT A. T. DAVENPORT

Annual reunion, third Friday in January.

LIST OF STUDENTS

REGULAR COLLEGE STUDENTS.

NOTE:—The following list includes the names of all students enrolled in the various colleges of the University, arranged in alphabetical order. Following each student's name and address are given his class, the course of study which he is pursuing, or the degree for which he is a candidate. The word freshman, sophomore etc., following the student's name indicates his rank on the first day of January, 1910. Students whose names are marked with an asterisk (*) are ranked as freshmen, but are conditioned in one or more preparatory subjects. Students marked as special students are classified in accordance with the regulations found on page of the catalogue.

Adkins, Asa Williams	Huntington	Soph., M.D.
Adkins, Louise McClung	Huntington	Dom. Sc.
Alexander, Mary Adeline	Wheeling	Jun., A.B.
Allen, James Cornwall	St. Marys	Fr., B.S.M.E.
Allender, James Guy	Grafton	2nd Year Law
Allison, George William	Morgantown	Bar Law
Allman, Evert Farl	Jane Lew	Special Vet. Sc.
Amos, Clay Dille	Fairmont	Jun., A.B.
Amos, Curt Edgar	Fairmont	Fr., A.B.
Andris, Irene Marie	Morgantown	Soph., A.B.
Arnold, Charles William	Keyser	Fr., C.E.
Arnold, Edna	Weston	Soph., A.B.
*Ashworth, Benjamin Harrison	Iaeger	Fr., A.B.
Atkeson, Mary Meek	Morgantown	Sen. A.B.
Atkeson, Leda Cordelia	Morgantown	Jun., A.B.
*Bailey, Sebie	Buckhannon	Fr., A.B.
Baker, Charles George	Morgantown	Jr., A.B.
Baker, Ray Elbert	New Matamoras, O.	Fr., C.E.
Baker, Virginia May	Huntington	Soph., A.B.
*Bambrick, Walter Steenrod	New Cumberland	Fr., M.D.
Barnes, Uriah	Leroy	Special
Barrickman, Van Ara	Morgantown	Grad. LL.M.
A.B. and LL.B., West Virginia University, 1900		
Barron, Howard Curtis	Shamokin, Pa.	Sen., Dip. Law
Bartlett, Howard Robert	Fairmont	Jun., A.B.

*Baugher, Edward James	Folsom	Fr., B.S.M.E.
Beardsley, Edward Henry	Hamilton, O.	Jun., B.S.C.E.
Bell, Ernest	Wana	Vet. Sc.
Beltzhoover, Lucie Adele	Shepherdstown	Soph., A.B.
Bernstein, Leonard Julius	Sutton	Soph., B.S.M.D.
Bess, Thomas Floyd Ernest	Hinton	Fr., M.D.
Best, Frank Phillips	Morgantown	Soph., B.S.E.M.
Bias, Bennett Randolph	Williamson	Bar Law
Biern, Samuel	Huntington	2nd Year Law
Billingsley, Jay Edgar	Morgantown	Sen., B.S.C.E.
Blair, Jackson Van Buren, Jr.	West Union	1st Year Law
Blum, Edward Likes	Baltimore, Md.	Special C.E.
Bobbitt, Ray Maxwell	Hinton	Fr. M.D.
Bock, Edward Sidney	Morgantown	2nd Year Law
Bolin, Hafid Alexander	Hinton	Bar Law
Bond, Marcus Orran	Wheeling	Sen., B.S.
Bonner, Harrie Russell	Parkersburg	Jun., A.B.
Borror, Bruce	Davis	Fr., B.S.M.D.
Boutwell, Louis Eugene	Lambertville, N. J.	Jun., A.B.
Boughner, Jennie	Morgantown	Soph., A.B.
Boughner, John Glenn	Sistersville	Fr. B.S.C.E.
Bowlby, Edward Frank	Bowlby	Special Agr.
Bowlby, Lona Lough	Bowlby	Dom. Sc.
Bradley, Walter Bruce	Perryopolis, Pa.	Soph., B.S.M.E.
Brake, Hyre Clyde	Auburn	Jun., A.B.
Brennan, William Joseph	Kingwood	Soph., B.S.M.E.
Brennan, John George	New York City, N. Y.	Special Med.
Brindley, Arthur Aquilla	Morgantown	Soph., M.D.
Brinkman Frederick Henry	Wheeling	Sen., Dip. Law
Brinsmade, Helen Christine	Morgantown	Grad., A. and S

A.B., University of Wisconsin

Britton, Luther Sherman	Morgantown	Sen., A.B.
Bromley, Edward Duvall	Ridgeway	Fr., B.S.C.E.
Brown, Charles	Morgantown	Special Agr.
Buchanan, Robert Lester	West Alexander, Pa	Sen., B.S.
Buck, James	Sistersville	Bar Law
Bufano, Michaelangelo Garibaldi	Morgantown	Sen., Dip. Law
Bullard, Archie Hupp	Wheeling	Sen. B.S.
Bunner, Ezra Elsworth	Morgantown	Bar Law
Burns, Corwin Sage	Morgantown	Fr., B.S.M.E.
Burnside, Guy Herman	Morgantown	2nd Year Law
Burrell, Howard Kenwell	Weston	Jun., B.S.C.E.
Burritt, Clark Culbertson	Washington, D. C.	Fr., B. S. C. E.
Cady, Agnes	Morgantown	Jun., A.B.
Cady, Elizabeth	Morgantown	Fr., A.B.
Callahan, Maud Fulcher	Morgantown	Grad., A. and S.

A.B., West Virginia University, 1908; A.M., *ibid.* 1909

*Calvert Charles Hukill	Cassville	Fr., A.B.
Camp, David Jesse Holland	Morgantown	Dip. Agr.
Campbell, Harry Lucas	Little Hocking, O.	Jun., B.S.C.E.
*Carden, David Lamont	Zela	1st Year Law
Carlin, Leo	Smithfield	2nd Year Law
Cather, Wilbur Earl	Fairmont	2nd Year Law
Chez, Louise Ferris	Morgantown	Dom. Sc.
Clark, Raymond Earl	Morgantown	1st Year Law
Clayton, Bruce Tilden	Morgantown	Bar Law
Clifford, Lucy Clare	Clarksburg	Jun., A. B.
Cole, Robert Lee	Wheeling	Grad. A.M.

A.B., West Virginia University, 1906

Coles, James Garfield	Wiconisco, Pa.	Special Med.
Compton, Elma Pearl	Keyser	Soph., A.B.
Conaway, Ernest Daniel	Enterprise	Soph., A.B.
*Conley, Phillip Mallory	Charleston	Fr., A.B.
Cooper, Everett Roy	Auburn	Soph., M.D.
Cooper, Francis Frederick	Morgantown	Fr., B.S.M.E.
Core, John Lee	Pentress	Vet. Sc.
Core, Lewis Smith	Morgantown	Sen., A.B.
Courtney John David	Morgantown	Fr., B.S.M.E.
Cox, Anna Grace	Millwood, Va.	Jun., A.B.
Cox, Nell Hazel	Fairmont	Soph., A.B.
Cox, Stanley Rhey	Morgantown	Jun., A.B.
Cox, Wayne	Morgantown	Fr., A. B.
Craddock, Bantz Wooddell	Glenville	Sen., Dip. Law
Craig, Joseph Sherman	Hookersville	Fr., M.D.
Crawford Thomas Wilmer	New Cumberland	Soph., B.S.C.E.
Creel, Thomas Hardin	Kanawha Station	Cer. Agr.
Crewson, George Grant	New Cumberland	Sen., B.S.M.E.
*Crichton, Walter Greig	Winifrede	Fr., B.S.E.M.
Crogan, Hubert Garrett	Newburg	Sen., Dip. Law
Cronin, David Arthur	Portland, Ct.	Sen., Dip. Law
Cummins, George Harold	Wheeling	Jun., B.S.M.E.
Dailey, Arthur Jerome	Buckhannon	1st Year Law
Damron, James	Williamson	Bar Law
Darby. Roy Clyde	Oil City, Pa.	Jun., Dip. Law
Davis, Anna Beulah Christine	Morgantown	Fr., A.B.
*Davis, Gail	Morgantown	Fr., A.B.
DeBerry, Helen Margaret	Terra Alta	Soph., A.B.
Dickason, Clara Elizabeth	Columbus, O.	Jun., A.B.
Dille, James Evans	Morgantown	Jun., B.S.Agr.
Donnally, Moses Stark	Charleston	Jun., B.S.M.E.
Douthitt, Carl Czerny	Kingwood	Bar Law
*Duncan, Robert Vance	Claysville, Pa.	Fr., B.S.Agr.
*Eagan, Fannie	Ronceverte	Fr., B.S.

Eaton, Harry Anthony	Morgantown	Sen., B.S.C.E.
A.B., West Virginia University, 1897; LL.B., *ibid*, 1898.		
Eckman, James Roy	Leechburg, Pa.	Sen., B.S.
Elson, Otto Dale	Wellsburg	Fr., B.S.C.E.
*Enlow, Cecil Thomas	Perryopolis, Pa.	1st Year Law
*Erwin, Thomas Hale	Salem	Fr., B.S.M.E.
Evans, Eugene Everly	Morgantown	Soph., A.B.
Evans, John Christler	New Cumberland	Sen., A.B.
Evans, Oscar Clay	Paden City	Bar Law
Everhart, Lee Frank	Buckhannon	Sen., Dip. Law
Evick, Walter Clifton	Beverly	Bar Law
Faust, Wirt Gerry	Fairmont	Soph., A.B.
Feller, Richard Roeder	Martinsburg	Fr., B.S.C.E.
Finlayson, John Kennedy	Sistersville	Sen., A.B.
Fisher, Milton DeWitt	Morgantown	Soph., B.S.C.E.
Fitzgerald, Boyce Ray	Oak Hill	1st Year Law.
Fitzwater, John Roger	Gad	Soph., B.S.Agr.
Fleshman, Howard Franklin	Morgantown	Soph., A.B.
Fling. Eva Myrtelle	Alfred	Jun., A.B.
Flournoy, Samuel Lightfoot	Charleston	Bar Law
Floyd, Charles Duffy	Glenville	Fr., B.S.
Foltz, Charles Roy	Martinsburg	1st Year Law
Forman, Nyna Lucy	Morgantown	Sen., B.S.
Foulk, Thomas Bond	Morgantown	1st Year Law
Fravel, Mary Stewart	Poca	Sen., A.B.
*Frazier, Paul Jenkins	Ft. Gay	Fr., M.D.
French, Robert Moss	Beckley	Bar Law
Friedman, Sidney Loth	Point Pleasant	2nd Year Law
Frye, Joseph Thurman	Rio	Cer. Agr.
Garlow, Homer Gale	Morgantown	1st Year Law
Garrett, Edmund	Bridgeport	Bar Law
Garrison, John Dunham	Sistersville	Jun., A.B.
Gaskins, Walter Wesley	Fairmont	Soph., B.S.C.E.
Gawthrop, Robert Murray	Bridgeport	Sen. B.S.C.E.
Gilchrist, Marion Champ	Charleston	2nd Year Law
Gilmore, Esther Jean	Saint Cloud	Soph., A.B.
Gilson, Van Wagener	Mannington	Soph., A.B.
Goff, Eustace Thomas	Juna	Fr., M.D.
Goff, William Rush	Spencer	Fr., A.B.
Gould, Richard Jay	Parkersburg	Jun., B.S.E.M.
Graham, Sidney Emmons	Hinton	Fr., B.S.
Graham, John Allen	Broomfield	Fr., A.B.
Grayson, John Lee	Morgantown	Jun., B.S.M.E.
Green, Et[illegible] Averil	Morgantown	Grad., A.M.
A.B., Wy[illegible]arrginia University, 1908		
*Greene [illegible] B.S. Horton	Bridgeport	Fr., B.S.
*Griffin [illegible] Lois	Belington	Fr., A.B.

Grimes, Gordon Bennett	Fairmont	Fr., B.S.Agr.
*Grimm, Homer Willard	St. Marys	Fr., M.D.
*Grogg, Robert Clifton	Parkersburg	Fr., A.B.
Grose, Edward Rutherford	Sago	Grad., A.M.

A.B., West Virginia University, 1909

Groves, Homer David	Earl	Soph., B.S.Agr.
Grow, George Walter	Williamstown	Jun., B.S.M.E.
Grubb, Joseph Krause	Parsons	Fr., B.S.C.E.
Gunnoe, George Hutchinson	Crany	1st Year Law
*Guseman, Sadie Ray	Morgantown	Fr., A.B.
Habermehl, John Henry	Woodland	Sen., Dip. Law
Hall, May	Proctor	Dom. Sc.
Hall, Frank	Proctor	Fr., B.S.Agr.
*Hall, Jerome Venoir	Buckhannon	1st Year Law
Hall, Roy Olney	Morgantown	Grad., LL.M.

LL.B., West Virginia University, 1909

Hamilton, Claude Dewis	Morgantown	Fr., M.D.
Hamilton, Grover Cleveland	Mole Hill	Fr., A.B.
Handley, Robert Arbuckle	Lewisburg	Fr., B.S.C.E.
Hardy, Annie Evelyn	Winterport, Me.	Dom. Sc.
Harless, Floyd Hinson	Dial	Bar Law
Harris, George Hunter	Hedgesville	Bar Law
Hefke, Julius Henry	Dayton, O.	Jun., B.S.
Heflin, Neal Minter	Grafton	Fr., B.S.M.E.
Henderson, Justin	Buckhannon	Sen., Dip Law
Henderson, Nellie Grant	West Alexander, Pa	Sen., A.B.
Henry, Emanuel	Jeannette, Pa.	Bar Law
Hensley, William Henry	Wayne	Bar Law
*Herring, Eleanor Emma	Kingwood	Fr., A.B.
Herring, Nellie May	Kingwood	Fr., A.B.
Hess, Robert Herman	Cameron	Bar Law
Hinds, Holman Blaine	Rockwood, Tenn.	Bar Law
Hodges, Charles Edward	Morgantown	Fr., A.B.
Hodges, Mabel Clare	Morgantown	Soph., B.S.
Hodges, Olive Ireland	Morgantown	Sen., A.B.
Hodges, Arthur Brown	Buckhannon	Jun., A.B.
Hoffman, Thomas Stewart	Morgantown	Bar Law
Hogsett, Everett Leon	Fair Plain	Bar Law
Holroyd, Mary Manning	Athens	Soph., A.B.
*Holt, John Howard, Jr.	Moundsville.	1st Year Law
Hoover, Lawrence Grant	Harrisville	Fr., A.B.
Hoover, Ollie Foster	Harrisville	Fr., A. B.
*Hopwood, Jane Clyde	Morgantown	Fr., A. b
Horstmann, Edward Frederick	Wheeling	3rd Y a Law
Hoskins, Homer Arthur	Weston	Sen., P B.S M.E. B.S.

*Hoskins, Stephen Paul	Weston	Fr., B.S.C.E.
*Houston, June Carey	Morgantown	Fr., B. S.
Hudson, Arthur Patrick	Charleston	Bar Law
Humes, Harry Oliver	Mannington	Fr., B.S.M.E.
Hundley, John Palmer	Mastontown	Sen., Dip. Law.
Hunt, Alfred Lewis	Ripley	Special Agr.
Hunt, William French	Morgantown	Fr., A.B.
Hunter, Liphus Glenn	Morgantown	1st Year Law.
Hurxthal, Josie Morton	Morgantown	Special, A. & S.
Hutchinson, Bernard Lee	Fairmont	Soph., B.S.
Hyre, Kenna Kester	Gay	Bar Law
Ice, Ethel	Farmington	Sen., A.B.
Ice, Lorey Francis	Smithfield	1st Year Law
*Jackson, George Reynolds	Clarksburg	Fr., A.B.
Jacobs, Arthur Melville.	Fairmont	Sen., A.B.
Jolliffe, Oliver Paul	Mannington	Fr., A.B.
Jones, James Clyde	Morgantown	Bar Law
*Jones, Roy Levi	Charleston	Fr., A.B.
Jordan, William Brightwell	Hinton	2nd Year Law
Judge, Robert Simms	Wellsburg	Sen., Dip. Law
Kahn, David Harmon	Parkersburg	Jun., B.S.E.M.
Kear, Harry Alexander	Van Wert, O.	Soph., B.S.M.E.
Kee, Jasper Newton, Jr.	Glenville	Sen., Dip Law
Keenan, Marl	Morgantown	Fr., B.S.C.E.
Kelley, Orlando Alfred	Morgantown	Special, A. and S.
*Kemper, John Riblett	Freemansburg	Fr., B.S.
Kennedy, John James	Fairmont	Soph., B.S.
Kern, Albert John	Fairmont	1st Year Law
*Kerr, Harman Haller	Davis	Fr., A.B.
*Kiger, Pearl Randolph	Sherrard	Fr., B.S.M.E.
King, Benjamin Walter	Morgantown	1st Year Law
King, Harry William, Jr.	Wheeling	Jun., Dip Law.
King, May Boughner	Morgantown	Soph., A.B.
Kirk, Jose de Almeida	Wheeling	Soph., B.S.E.E.
Kirson, Daniel	Martinsburg	1st Year Law
Kisar, Adam Frederick	Point Pleasant	2nd Year Law
Knowlton, Helen Riggan	Morgantown	Soph., B.S.
Koelz, Frederick Rost	Keyser	Sen., A.B.
Krak, Marie Clasine	The Hague, Holland	Jun., A.B.
Kunkle, Josephine Margaret	Morgantown	Grad., A.M.

A.B., West Virginia University, 1897

Kurner, David Conrad, Jr.	Wheeling	Bar Law
Laidley, William Sidney, Jr.	Charleston	Bar Law
Lambdin, Allen Bennett	Keyser	Soph., B.S.E.E.
Lang, Edgar Reed	Martinsburg	Jun., B.S.
Lashley, Karl Spencer	Davis	Sen., B.S.

Lavelle, William Griffith	Tunnelton	2nd Year Law
Law, Verner Vadis	Lawford	Dip. Agr.
Lemen, Thomas Thornburg, Jr.	Martinsburg	Bar Law
Lemley, Grover Cleveland	Morgantown	Sen., B.S.C.E.
*Levy, Jay Berthrand	New Cumberland	1st Year Law
Lewellyn, Frank Bowman	Morgantown	Fr., A.B.
Littlepage, Burrell Kemp	Charleston	Jun., Dip. Law
Lively, Elsey	Roseville	Soph., B.S.Agr.
Lloyd, Wylie Everette	New Cumberland	Sen., B.S.Agr.
Loar, Robert Allison	Morgantown	Bar Law
*Lodge, John Dunkin	Bridgeport	Fr., B.S.
Lough, Charles Melvin	Cameron	Jr., B.S.
Lough, William Cleveland	Cameron	Soph., B.S.
Louchery, Charles William	Clarksburg	Sen., A.B.
Luttrell, Ernest Love	Martinsburg	Bar Law
Lytle, Clara Belle	Parkersburg	Sen., A.B.
Macklin, Ernest Walker	Mannington	Bar Law
Madera, Mary Grace	Morgantown	Fr., A.B.
Manning, Kemble Thatcher	Moundsville	2nd Year Law
Martin, Cullen Guile	Clarksburg	Soph., B.S.M.E.
Martin, Cyrus Howard	Masontown	Special A. and S.
*Martin, Truman Morris	Newell	Fr., A.B.
Maxwell, Ida Ruth	Morgantown	Fr., A. B.
May, John Dorilas	Dovesville, Va.	Fr., A. B.
McClure, Lawrence Ledwith	Wayne	1st Year Law
McCombs, Edgar Pearl	Sherrard	Sen., B.S.C.E
*McConnell, Nelle Margaret	Sherrard	Fr., A. B.
McCreery, Denver Collins	Morgantown	Fr., B. S. M. E.
McCullough, Frank Witcher	Huntington	Sen., Dip. Law
McDonald, Logan	Sycamore	Soph., B.S.C.E.
McDonald, Marshall Woodrow	Charles Town	Grad., Agr.

B.S.C.E., West Virginia University, 1906

McGinnis, Howard Justis	Morgantown	Fr., B. S.
*McIntyre, Dennis Selkirk	Hepzibah	Fr., A. B.
McMinn, Vaun	Jefferson, Pa.	Fr., A. B.
McMinn, Thomas Roach	Morgantown	Soph., A. B.
McVey, Earle Yancy	Victor	Soph. B.S.C.E.
Mealy, Frederick Earle	Morgantown	Fr., B.S.C.E.
Merrill, Austin Cook	Morgantown	2nd Year Law
Miller, Charles Edward, Jr.	Morgantown	Fr., A.B.
Miller, Alexander	Morgantown	Fr., A. B.
Miller, Charles Elmer	Glover Gap	Bar Law
Miller, John Leman	Claysville, Pa.	Fr., B.S.M.E.
Mockler, Margaret Eleanor	Mannington	Sen., A.B.
Mollison, John Lowstetter	Scottdale, Pa.	2nd Year Law

Montgomery, Allen Guy	West Liberty	Soph., B.S.
Moon, Charles	Morgantown	Sen., B.S.C.E.
Moore, Susan Maxwell	Morgantown	Grad., A.M.
A.B., West Virginia University, 1909		
Moran, Irving Hayne	Morgantown	Sen., B.S.M.E.
Morgan, Charles Raymond	Tunnelton	Bar Law
Morgan, Nancy Purley	Alexander	Jun., A.B.
Morris, James Thomas	Cassville	Fr., B.S.C.E.
Morris, Leroy Holmes	Connellsville, Pa.	Sen., B.S.M.E.
Morris, Samuel John	Morgantown	Soph., B. S.M.D.
Muldoon, William Edward	Waverley, N. Y.	Fr., Vet. Sc.
Murphy, Riley Bowman	Newville	Bar Law
Myers, Estella Woodford	Morgantown	Dom. Sc.
Nebinger, Richard Wright	Steelton, Pa.	Sen., Dip. Law
Neil, Grace Gardner	Morgantown	Jun., A.B.
Nutter, Trevey	Fairmont	3rd Year Law
Oldhan, Edward Curtis	Moundsville	Jun., B.S.M.E.
Osborn, George Morris	Clarksburg	Soph., B.S.M.E.
*Padin, Russell Homer	Parkersburg	Fr., M.D.
Parrish, Roy Earl	Clarksburg	Sen., Dip. Law
Patterson, Marjorie Bonner	Morgantown	Jun., A.B.
Patterson, Thomas Shaffer	Morgantown	Sen., B.S.M.E.
Pearcy, Earl	Morgantown	Vet. Sc.
Peters, Alvis Heber	Grant Town	Fr., B.S.M.D.
Peterson, Ethel Crim	Weston	Sen., A.B.
Peterson, Verd	Weston	Sen., A.B.
Pickenpaugh, Beulah Frank	Morgantown	Soph., A.B.
Pipes, Walter Logan	Cameron	Sen., B.S.M.E.
Pitzer, Thomas Clyde	Mannington	Soph., B.S.M.E.
Pocock, Herman Diedler	Morgantown	Jun., B.S.
Point, Walter Warren, Jr.	Huntington	Sen., A.B.
Poling, Herman	Philippi	1st Year Law
Poling, William Luther	Kentuck	Bar Law
Pool, Clark Francis	Chester	Soph., B.S.
Post, Cecil Omar	Wolf Summit	Soph., M.D.
Post, Clarence	Morgantown	Grad., A.M.
A.B., West Virginia University, 1907		
Posten, Roscoe Parriott	Morgantown	Soph., A.B.
Powell, Grover Cleveland	Fairmont	Bar Law
Prichard, Mahala Dorcas	Fairmont	Sen., A.B.
*Prickett, Clarence James	Fairmont	Fr., B.S.M.D.
Pritt, Wayne Kennedy	Parsons	Bar Law
*Psaki, Constantine George	New York City, N. Y.	Fr., M.D.
Pugh, Clyde Charles	Wheeling	Fr., B.S.C.E.
Purinton, Helen Elizabeth	Morgantown	Fr., A.B.
*Ramsey, Nicholas Hance	Ramsey	Fr., A.B.

Reed, Bessie Jane	West Alexander, Pa	Fr., A.B.
Reed, Robert Sidney	Boothsville	Jr., A.B.
Reeves, Roscoe	Fairmont	Fr., B.S.C.E.
Reeves, Frank	Fairmont	Sen., A.B.
Reger, David Bright	Buckhannon	Jun., B.S.C.E.
Reiner, Ada Eleanor Means	Morgantown	Soph., A.B.
Reiner, Pearl Louise	Morgantown	Jun., A. B.
Reiner, Phinny Porter	Morgantown	Soph., B.S.
Reinheimer, Malvin Herman	Fairmont	Soph., A.B.
Rhodes, George Edward	Charleston	Sen., A.B.
Riddle, James Harrison	Wheeling	Soph., B.S.
Riggs, Howard Charles	St. Marys	1st Year Law
Rightmire, Edna	Morgantown	Grad., A. and S.

A.B., West Virginia University, 1907

Robinett, John Hugh	Athens	Fr., A.B.
Robinson, Charles Stillman	Uniontown, Pa.	Fr., A.B.
Robinson, John Lowrie	Uniontown, Pa.	Jun., A.B.
Robinson, John Henry	New Martinsville	Jun., Dip. Law
Rogers, Harold Thomas	Moundsville	Fr., B.S.
Ross, Donald	Morgantown	Sen., A.B.
Rotunno, Robert Ralph	Morgantown	Fr., B.S.M.E.
Ryan, Charles Calvin	Smithfield, Pa.	Soph., M.D.
Ryan, John Donald	Morgantown	Fr., A.B.
Ryan, Lonnie Watterson	Morgantown	Jun., B.S.
Sander, Frank Vanderslice	Wheeling	Soph., B.S.
Sanger, Samuel Henry	Sanger	Jun., B.S.M.E.
Scaggs, Fisher	Wayne	Bar Law
Scott, Elliott Clyde Waldo	Beckley	Sen., Dip. Law
*Scott, George Vane	Chester	Fr., M.D.
*Scott, Neva Augusta	Morgantown	Fr., A.B.
Sheets, Goldie	Morgantown	Jun., A.B.
Sheets, Earl Wooddell	Lost Creek	Soph., B.S. Agr.
Shores, Henry Gassaway	Keyser	Sen., Dip. Law
Shriver, Forest Oral	Morgantown	Fr., B.S.M.E.
Shuman, Albert	Amos	Bar Law
Shunk, Ivan Vaughan Detweiler	Morgantown	Fr., A.B.
Shurtleff, Oliver	Fairmont	Soph., A.B.
Six, Lida Jane	St. Cloud	Soph., A.B.
Skinner, Dean Cook	Morgantown	Fr., B.S.M.E.
*Sloan, Charles Alonzo	Meadville	Fr., B.S.C.E.
Smith, Leola May	Morgantown	Soph., A.B.
Smith, Lee Allan	Morgantown	Grad., A.M.

A.B., West Virginia University, 1908

Smith, Edith Scott	Morgantown	Soph., A.B.
Smith, Boyd Milford	Elkins	2nd Year Law
Smith, Charles John	Whipple, O.	Bar Law

Smith, Enoch, Jr.	Elm Grove	Bar Law
Smith, Fred Manning	Charleston	Fr., A.B.
Smith, Jett Lambert	New Cumberland	Dip. Agr.
Smith, Susan Louise	St. Marys	Soph., A.B.
Solins, Samuel	Kimball	Bar Law
Spears, Ivan Reed	Morgantown	Fr., B.S.E.E.
*Speer, Edgar Boyle	Morgantown	Fr., A.B.
*Sperling, Harry Edward	Swanton, O.	Fr., B.S.
Spiker, Claud Carl	Masontown	Soph., A.B.
Springer, Charles Woodward	Pittsburg, Pa.	Soph., C.E.
Staats, Carter Willard	Skidmore	Bar Law
Staker, Lewis Anton	Huntington	Bar Law
Stansbury, Herbert Earl	Marshes	2nd Year Law
*Starcher, George Columbus	Weston	Bach. Agr.
Stathers, Nellie Dauphine	Morgantown	Grad., A.M.
A.B., Brown University		
Stealey, Genevieve	Clarksburg	Jun., A.B.
Stealey, Louise	Clarksburg	Fr., A.B.
Steele, Eleanor Victoria	Morgantown	Sen., A.B.
Steele, Francis Willard	Morgantown	1st Year Law
Steele, Harriett Effie	Morgantown	Soph., B.S.
Stemple, Forrest Wilbur	Morgantown	Grad., A.M.
A.B., West Virginia University, 1908		
Stemple, Rodney Milton	Aurora	Sen., B.S.
Stephenson, Burroughs Agin	Morgantown	Soph., B.S.C.E.
Stilphen, Harry Leslie	Gardiner, Me.	Soph. M.D.
Stockhammer, Raymond Jerome	New York City, N. Y.	Special Med.
Stulting, Harry Cooper	Alderson	Jun., B.S.C.E.
*Sturgiss, Anna Gans	Morgantown	Fr., A.B.
Swearingen, Edwin Lewis	New Cumberland	Sen., Dip Agr.
Sydenstricker, Harry Sydney	Morgantown	Fr., B.S.Agr.
*Sydenstricker, Lawrence Elbert	Morgantown	Fr., B.S.M.E.
Sydenstricker, Carl Raymond	Morgantown	Fr., B.S.M.E.
Tait, John Finley	Morgantown	Fr., B.S.E.M.
Tallman, Floyd Ellis	Elkins	Bar Law
Tapp, Marion Ethel	Morgantown	Soph., A.B.
Taylor, Ernie Pearl	Morgantown	Grad., A.M.
A.B., West Virginia University, 1904		
Taylor, George Edmond	Morgansville	Fr., B.S.C.E.
Tetrick, Claude Spray	Enterprise	Soph., B.S.C.E.
Thacher, William Reynolds	Williamsburg	Jun., A.B.
Thayer, Ralph Thomas	Oakland, Md.	Fr., B.S.C.E.
Theakston, Pauline	Morgantown	Jun., A.B.
Thompson, Robert Napoleon Bonaparte	Barboursville	Bar Law

Torrance, Andrew Alfonso	Morgantown	Sen., B.S.
Tracy, Benjamin Franklin	Wheeling	Fr., B.S.M.E.
Tucker, Harrison Ray	Fairmont	Fr., B.S.
Tuckwiller, Edward Hill	Morgantown	Jun., A.B.
Turner, James Jackson	Morgantown	Bar Law
Tuttle, Rena Frances	Morgantown	Sr., A.B.
Twyford, George Truman	West Union	Jun., B.S.M.E.
Vance, Joseph Cochran	Morgantown	Sen., A.B.
Vance, Helen Blanche	Erie, Pa.	Sen., A.B.
Vandale, Frederick	Schilling	Fr., B.S.C.E.
*Vandervort, John Paul	Morgantown	Fr., B.S.
Vandervort, Hu Swisher	Morgantown	Jun., B.S. Agr.
Van Gilder, Elmer French	Morgantown	Soph., B.S.
Van Gilder, Zoe Wade	Morgantown	Soph., A.B.
Vass, Thurman Elroy	Bluefield	Fr., M.D.
Vieweg, George Bowers	Wheeling	Soph., B.S.M.E.
Walkup, Homer Alan Lepps	Falling Springs	Soph., B.S.M.D.
Warden, Rhea Watson	Grafton	Soph., A.B.
Warman, Altha	Morgantown	Grad., LL.M.

A.B., West Virginia University, 1893; LL.B., 1902

Warrick, Edith Gretchen	Morgantown	Fr., A.B.
Waters, Gladys Mary	Morgantown	Soph., A.B.
Watkins, Miflin Marsh	Wheeling	1st Year Law
Watson, Roger Earl	Martinsburg	2nd Year Law
Weadon, Karl Harper	Mt. Carbon	Sen., Dip. Law
Weiss, Howard Edward	Canton, O.	Fr., A.B.
West, Thomas	Morgantown	Bar Law
Wharton, Jacob Lemley	Morgantown	Bar Law
Wheat, Harry Grove	Davis	Soph., A.B.
Wheeler, George Bonnie	Clay	Fr., M.D.
White, Horance Laban	Bristol	Sen., A.B.
Whitehill, Elizabeth Wilson	Morgantown	Dom. Sc.
Weistling, Helen Merwin	Wheeling	Jun., A.B.
Wiley, Harry Ruffner	Malden	Sen., B.S.C.E.
Wilkerson, Orla McCombs	Wolf Run	1st Year Law
Williams, Arthur Robert	Tunnelton	Vet. Sci.
*Williams, Edgar	Morgantown	Fr., A.B.
Willis, Arthur Burton	Shinnston	Vet. Sci.
Willis, Dennis Martin	Morgantown	Grad., A. and S.

LL.B., West Virginia University, 1899; A.B., *ibid*, 1905; LL.M., *ibid*, 1908

Wilmoth, Emily Josephine	Elkins	Jun., A.B.
Wilson, Lewis Leitch	Winifrede	Soph., B.S.M.E.
Wilson, Charles Bruce	Winifrede	Soph., B.S.M.E.
Wilson, Stella Rebecca	Harrisville	Jun., A.B.
Winer, Aaron	Morgantown	3rd Year Law

Wolfe, Noble Abner	Morgantown	Sen., B.S.M.E.
Wolfe, Viola Amanda	Morgantown	Jun., A.B.
*Woodford, Alberta	Morgantown	Fr., A.B.
Woodhouse, Shepherd James	Loudon Bridge, Va	Bar Law
*Wyatt, John Benjamin	Shinnston	1st Year Law
York, John, Jr.	Kenova	Fr., B. S.
Yount, Carl Cossman	Morgantown	Jun., A.B.
Yount, John Arndt	Morgantown	Grad., A.M.

A.B., Roanoke College, 1901

SHORT COURSE AND IRREGULAR STUDENTS.

Students whose names appear in the following list are taking work in the University, but they are not regularly registered, and, for reasons satisfactory in each case, are doing less than the regular amount of work.

Alkire, Charles James	Keyser	S.C. Agr.
Bailey, Ida May	Travrese City, Mich.	Irreg.
Beaumont, Laura Jefferson	Morgantown	Irreg.
Behrens, Edward Charles Wm.	Wheeling	S.C. Agr.
Bonar, Alvin Frank	Belleville	S.C. Agr.
Borgman, Clemens Bernard	Kingwood	S.C. Agr.
Bowers, Lizzie May	Kirby, Pa.	Irreg.
Bowman, James Daniel	Hoult	S.C. Agr.
Brooks, Ellis Walton	French Creek	S.C. Agr.
Chew, Sara West	Charles Town	Irreg.
Coffield, Alvinzia Elmer	Proctor	S. C. Agr.
Coffman, Howard Dixon	Fort Spring	S. C. Agr.
Corbin, Blanche	Fairmont	Irreg.
Core, Moses Levin	Mt. Morris, Pa.	S. C. Agr.
Cunningham, Joseph Curtis	Pickens	S. C. Agr.
Edwin, Charles Emmett	Ronceverte	S. C. Agr.
Gortner, Fred	Mt. Lake Park, Md	S. C. Agr.
Hindman, Edwin Langfitt	Hollidays Cove	S. C. Agr.
Hoffman, Daniel Clark	Morgantown	S. C. Agr.
Hopwood, Margaret Bradfield	Morgantown	Irreg.
Howard, Clarence	Cowen	S. C. Agr.
Hoosep, Ignatius	Morgantown	Irreg.
Ireland, John Jackson	Buckhannon	S. C. Agr.
Jones, Josephus	Morgantown	S. C. Agr.
Liming, Dallas	Morgantown	S. C. Agr.
Loar, William	Morgantown	S. C. Agr.
McCombs, Albert Allen	Sherrard	S. C. Agr.
Miller, Abram Snyder, Jr.	Kearneysville	S. C. Agr.
Mount, Ai Cebastian	Lost Creek	S. C. Agr.

Park, Albert Valentine	Knobley	S. C. Agr.
Pixler, William Judson	Morgantown	S. C. Agr.
Poole, Gladys Guseman	Morgantown	Dom. Sc.
Rockwell, Charles Henry	Berkeley Springs	S. C. Agr.
Schley, Virginia Muzzey	Shepherdstown	Irreg.
*Scott, Pearl	Pennsboro	Irreg.
Spahr, Belle Lee	Kingwood	Irreg.
Sperow, James Holland	Hedgesville	S. C. Agr.
Swisher, Burgett	Jane Lew	S. C. Agr.
Swisher, George William	Lost Creek	S. C. Agr.
Wade, Charlotte Esther	Mt. Morris, Pa.	Irreg.
Wertime, Gertrude	Cohoes, N. Y.	Irreg.
Williams. Jenkin Lewis	Morgantown	Irreg.

AGRICULTURAL EXTENSION STUDENTS.

(Not enrolled at Morgantown.)

Alkire, Vause Fox	Keyser
Alkire, Charles James	Keyser
Allen, Daniel Wirts	Wheeling
Arnold, David Alexander	Keyser
Arnold, John Sloan	Keyser
Arnold, Samuel Edgar	Keyser
Arnold, Silas Milton	Burlington
Baker, Hezekiah Claggett	Moorefield
Ballenger, John Floyd	Burnt House
Ballinger, Jenkins Willey	Burnt House
Beall, Charles Fisher	Burnt House
Behrens, Edward Charles William	Wheeling
Behrens, William	Wheeling
Bertley, James, Sr.	Cowen
Black, James Downing	Sherrard
Bobbitt, Alexander Winfield	Cowen
Bobbitt, Lee Hill	Cowen
Bonnett, Ulysses Grant	Burnt House
Bosley, Harvey	Oldfields
Burrows, Lewis Wetzel	Cowen
Bush, Ellet Lawson	Burnt House
Chipley, John Dixon	Moorefield
Clayton, Aretus	Burnt House
Clower, John Grove	Glebe
Cook, Harvey Elisha	Sherrard
Cookman, Adam Columbus	Cowen
Cunningham, Thomas	Moorefield
Dailey, Benjamin	Moorefield
Dasher, Manasseh	Moorefield
Dayton, Patrick Miller	Knobley
Dean, Dennis Hardwick	Cowen
Dowler, Edward Samuel	Moundsville
Dye, William Edgar	Ridgeville
Fisher, George Welton	Moorefield
Fisher, John Cunningham	Moorefield
Fisher, Otto Shultz	Moorefield
Fling, Isaac	Burnt House
Fling, Perry Jackson	Burnt House
Gamble, Mortimer	Oldfields
Garvin, Daniel Milroy	Sherrard
Gelwicks, John	Keyser
Giesler, John Henry	Sherrard
Gilkeson, James William	Moorefield

Gilkenson, John William	Moorefield
Goff, Floyd Penic	Hazel Green
Goff, James Isaac	Burnt House
Goff, James Newton	Burnt House
Goff, Joseph Warren	Hazel Green
Goudy, Reed	Sherrard
Halterman, Robert Allen	Moorefield
Hardman, Thomas Orland	Fonzo
Hartmann, James Fleet	Burnt House
Haynes, George	Wheeling
Herold, George	Cowen
Hervey, Walter	Sherrard
Hill, Floyd	Burnt House
Hoffman, Henry Huntley	Keyser
Hood, Osa	Keyser
Howard, Clarence	Cowen
Huff, Alstorphaeus Cecil	Burnt House
Huffman, Daniel Frederick	Keyser
Huffman, Thaddeus Taylor	Keyser
Jackson, Ernest	Keyser
Kessler, Daniel	Cowen
Kelley, George	Keyser
Kelley, Philip	Keyser
Kessner, Joseph Luther	Keyser
Kiger, Burch	Sherrard
Klages, Edward	Sherrard
Klages, William	Elm Grove
Klein, John Wesley	Romney
Law, Willey	Lawford
Leatherman, Edgar Aldine	Oldfields
Leatherman, George	Oldfields
Leatherman, William Arnold	New Creek
Leps, James Edwin	Keyser
Liller, Edgar Howard	Keyser
Liller, William	Keyser
Long, Isaac McCarty	Keyser
Loy, Edgar Johnson	Moorefield
Martin, David Riley	Cowen
McCauley, George Washington	Moorefield
McCleary, Anthus Vincent	Sherrard
McCombs, Charles	Wheeling
McCombs, Edgar Woods	Sherrard
McConnell, Albert Russell	Sherrard
McDonald, Abbie Brooks	Cowen
McDowell, John Thomas	Burlington
McNeill, Augustus Renick	Oldfields
McNeill, James Overton	Oldfields
Metcalf, Jacob Henry	Keyser

Miller, Floyd	Upper Glade
Muldoon, John Dement	Keyser
Mull, John Littleton	Wheeling
Nethken, Charles Ervin	Keyser
Orum, Joseph	Sherrard
Park, Samuel Ashby	Knobley
Parsons, George Washington	Keyser
Patrick, Thomas Newton Kirk	Fonzo
Remke, Clarence	Sherrard
Remke, Henry	Sherrard
Rogerson, John Franklin	Sherrard
Romig, Emerson Van	Keyser
Schwartzwalder, Michael	Point Pleasant
Shriver, Lulu	Cowen
Spott, Oscar Franklin	Keyser
Springston, John Gideon	Upper Glade
Starcher, Solomon	Bolair
Stehley, John Alexander	Keyser
Stine, George Washington	Needmore
Tingler, Aaron	Burnt House
Urice, Frank Alvun	Keyser
Vance, Alexander	Cowen
Vandiver, John William	Belington
Vanmeter, William Thompson	Moorefield
Weaver, John Harvey	Burnt House
Wellton, Arch	Keyser
Welton, Cleal	Moorefield
Welton, Page	Moorefield
White, Wilson Henry Stout	Cowen
Willison, Francis Melton	Keyser
Wilson, Arthur Vance	Moorefield
Wilson, Joseph Henry	Moorefield
Wilson, Charles Andrew	Burnt House
Workman, Ulysses Grant	Keyser
Wright, George Granville	Burnt House

THE UNIVERSITY COLLEGES—SUMMARY OF ENROLLMENT FOR 1909-10.

(as far as reported May 1, 1910)

THE COLLEGES.	Number in Faculty	Degrees Granted, 1909	Diplomas Granted, 1909	CANDIDATES FOR Degrees								Diploma or Certificate			Special Students			Irregular and Short Course Students			Total Number of Students at Morgantown			Enrolled in Extension Schools		
				Grad.	Sen.	Jun.	Soph.	Fresh.	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Arts and Sciences	.....	.....	.....	17	33	38	44	64	111	88	199	.....	.....	.....	3	2	5	2	19	21	116	109	225	.....	.....	.....
Engineering	.....	.....	.....	.....	14	14	20	40	88	.....	88	.....	.....	.....	1	.....	1	.....	.....	.....	89	.....	89	.....	.....	.....
Agriculture	.....	.....	.....	1	2	2	4	4	13	.....	13	9	.....	9	6	.....	6	28	.....	28	56	.....	56	124	2	126
Law	.....	.....	.....	3	12	17	4	11	47	.....	47	21	.....	21	52	.....	52	.....	.....	.....	120	.....	120	.....	.....	.....
Medicine	.....	.....	.....	.....	.....	.....	9	17	26	.....	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	26	.....	26	.....	.....	.....
Total	.....	.....	.....	21	61	71	81	136	285	88	373	30	.....	30	62	2	64	30	19	49	407	109	516	124	2	126

STUDENT ENROLLMENT BY STATES

West Virginia	592
Pennsylvania	22
Ohio	9
New York	5
Maryland	3
Michigan	1
Connecticut	1
New Jersey	1
Tennessee	1
Maine	2
Washington, D. C.	1
Virginia	3
Holland	1

NUMBER IN FACULTY

Professors Emeritus	1
Professors	37
Associate Professors	5
Assistant Professors	4
Instructors	8
Assistants	5
Library staff	5
Total	65

STUDENT ASSISTANTS

The following students though not regularly appointed as members of the teaching force of the University, acted as laboratory assistants during the year:

In the Department of Chemistry:

JAMES ROY ECKMAN and ARCHIE HUPP BULLARD

In the Department of Civil Engineering:

EDGAR PEARL MCCOMBS

In the Department of Mechanical Engineering:

THOMAS SHAFFER PATTERSON and NOBLE ABNER WOLFE

In the Department of Physical Training:

ROBERT LEE COLE, GEORGE WALTER GROW and REBECCA CORE

In the Department of Physics:

CHARLES MOON

In the Department of Zoology:

KARL SPENCER LASHLEY

WEST VIRGINIA UNIVERSITY

CATALOGUE

1909 - - - 1910

ANNOUNCEMENTS

1910 - - - - 1911

THE SCHOOLS.

MORGANTOWN, WEST VIRGINIA
PUBLISHED BY THE UNIVERSITY

CONTENTS

Calendar 4

Board of Control and Board of Regents 6

Officers of Instruction and Administration 7

School of Music 14

School of Fine Arts 23

Summer School 26

Preparatory School 51

Agricultural Experiment Station 64

Diplomas, certificates, and prizes 66

List of students 68

Summary of Enrollment 84

Index 85

CALENDAR FOR 1910, 1911, 1912.

1910

JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

1911

JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

AUGUST

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DECEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

1912

JANUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

MARCH

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

APRIL

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

CALENDAR

1910

June 20, Monday.....Summer School Begins
July 29, Friday.....Summer School Ends
September 19, Monday.....Fall Quarter Begins
September 19, 20, 21, Monday, Tuesday, and Wednesday....
..... Entrance Examinations
September 19, 20, 21, Monday, Tuesday, and Wednesday....
.....Matriculation and Registration of Students
September 22, Thursday.....Recitations of Fall Quarter Begin
September 22, Thursday, 8:00 P. M.....Fall Convocation
November 24, to November 27.....Thanksgiving Recess
December 13, Tuesday.....Last Recitations of Fall Quarter
December 14, Wednesday, to December 16, Friday, inclusive..
.....Final Examinations of Fall Quarter
December 17, Saturday, to January 2, 1911.....Quarterly Recess

1911

January 3, Tuesday (Registration Day)....Winter Quarter Begins
January 4, Wednesday.....Recitations of Winter Quarter Begin
January 5, Thursday, 8 P. M.....Winter Convocation
February 22, Wednesday.....Washington's Birthday, a Holiday
March 21, Tuesday.....Last Recitation of Winter Quarter
March 22, Wednesday, to March 24, Friday.....
.....Final Examination of Winter Quarter
March 24, Friday.....Winter Quarter Ends
March 25, Saturday, to March 27, Monday.....Quarterly Recess
March 28, Tuesday (Registration Day)....Spring Quarter Begins
March 29, Wednesday.....Recitations of Spring Quarter Begin
March 30, Thursday, 8 P. M.....Spring Convocation
May 30, Tuesday .....Memorial Day, a Holiday
June 6, Tuesday.....Last Recitations of Spring Quarter
June 7, Wednesday, to June 10, Saturday, inclusive.....
.....Final Examinations of Spring Quarter
June 14, Wednesday.....Commencement

STATE BOARD OF CONTROL

JAMES S. LAKIN, President.....Charleston
THOMAS E. HODGES, Treasurer.....Charleston
JOHN A. SHEPPARD .....Charleston
L. V. REED, Secretary.....Charleston

STATE BOARD OF REGENTS

M. P. SHAWKEY, President.....Charleston
J. B. FINLEY.....Parkersburg
GEO. S. LAIDLEY .....Charleston
M. C. LOUGH .....Fairmint
G. A. NORTHCOTT .....Huntington
P. W. MORRIS, Secretary.....Parkersburg

OFFICERS OF ADMINISTRATION AND INSTRUCTION

THE OFFICERS OF THE UNIVERSITY

DANIEL BOARDMAN PURINTON, Ph.D., LL.D., President
POWELL BENTON REYNOLDS, D.D., Chaplain
WAITMAN BARBE, Litt.D., Assistant to the President and Field Agent
SUSAN MAXWELL MOORE, Dean of Women
ALFRED JARRETT HARE, A.M., Registrar
ALEXANDER REID WHITEHILL, Ph.D., Bursar
DAVID DALE JOHNSON, A.M., Editor of University Bulletin

THE UNIVERSITY COUNCIL

Daniel Boardman Purinton
Harry Anthony Eaton
Alfred Jarrett Hare
Alexander Reid Whitehill
Waitman Barbe
Powell Benton Reynolds
Charles Edgar Hogg
Thomas Clark Atkeson
Frederick Wilson Truscott
Will Hazen Boughton
Robert Allen Armstrong

STANDING COMMITTEES

Classification and Grades

Jasper Newton Deahl
Alfred Jarrett Hare
Frank Butler Trotter
Clement Ross Jones
James Morton Callahan

Ways and Means

Charles Henry Patterson
William P. Willey
John Arndt Eiesland
Frederick Lincoln Emory
Louis Black

Athletics

Henry Sherwood Green
Aretas Wilbur Nolan
Anthony Wencel Chez
Harry Anthony Eaton
Dennis Martin Willis

Students' Aid

Russell Love Morris
William Jackson Leonard
Frederick Lawrence Kortright
Rufus West

Library

Lucy Ella Fay
James Morton Callahan
Henry Sherwood Green
Albert Moore Reese
Charles Henry Patterson

Women Students

Grace Martin Snee
Margaret Buchanan
Susan Maxwell Moore
Louise Ferris Chez
Eva Emma Hubbard

Stationery and Printing

John Harrington Cox
Simeon Conant Smith
Oliver Perry Chitwood
Frank Butler Trotter
David Dale Johnson

THE FACULTY

DANIEL BOARDMAN PURINTON, PH.D., LL.D., President's House

President and Professor of Philosophy

A.B., West Virginia University, 1873; A.M., *ibid.*, 1876; Ph D., University of Nashville, 1892; LL.D., Denison University, 1889. Instructor, Preparatory Department of West Virginia University, 1873-8; Professor of Logic, *ibid.*, 1878-81; Professor of Mathematics, *ibid.*, 1881-5; Professor of Metaphysics, *ibid.*, 1885-9; Vice-President and Acting President, *ibid.*, 1881-2; Instructor in Vocal Music, *ibid.*, 1873-89; President, Denison University, 1890-1901; present position since 1901.

ALFRED JARRETT HARE, A. B., A.M. 411 High Street

Professor of Latin Language and Literature and Principal of the Preparatory School

A.B., West Virginia University, 1889; A.M., *ibid.*, 1902; Graduate student, Harvard University, 1900-1901. Assistant in Latin and Mathematics, Preparatory School, West Virginia University, 1889-96; Preparatory Professor of Ancient Languages and Mathematics, *ibid.*, 1896-8; Professor of Latin, 1898-1901; present position since 1901.

SUSAN MAXWELL MOORE, A.B. 247 Willey Street

Dean of Women and Instructor on the Piano

A.B., West Virginia University, 1909; Student in Peabody Institute, Baltimore, Maryland, 1878-9; Student in New England Conservatory, Boston, Massachusetts (Piano, Carl Faelten; Organ, George E. Whiting), 1885-7. Teacher of Piano, Mount Holyoke College, Massachusetts, 1887-91; Student in Berlin (Piano, Oscar Raif), 1891-2; Teacher of Piano, Conservatory of Music, Ottumwa, Iowa, 1892-3; Head of Piano Department, Shepardson College and Denison University, Granville, Ohio, 1893-1903; Summer Course under Carl Faelten, Boston, Massachusetts, 1898; Faelten Piano School, Summer, 1901; present position since 1903.

ANTHONY WENCEL CHEZ, A.B. 748 North Front Street

Director of Physical Training

Graduate, Chautauqua School of Physical Education, 1902; Graduate, Harvard School of Physical Training, 1903; A.B., West Virginia University, 1907. Graduate Coach, Oberlin College, 1899; Director of Gymnasium and Athletic Coach, Wabash College, 1900-1; Professor of Physical Training and Athletic Coach, DePauw University, 1901-2; Director, Physical Culture and Athletic Coach, University of Cincinnati, 1902-04; Assistant, Harvard Summer School of Physical Training, 1905; present position since 1904.

HARRY ANTHONY EATON, A.B., LL.B. 299 Grand Street

Captain U. S. Army, Professor of Military Science and Tactics and Commandant of Cadets

A.B., West Virginia University, 1897; LL.B., *ibid.*, 1898. Sergeant Major 1st West Virginia Volunteers, May 14 to 22, 1898; 1st Lieut. 1st West Virginia Volunteers to July 21, 1898; 2nd Lieut. 8th United States Infantry, July 22, 1898; Served in that regiment until promoted Captain, August 22, 1903, and assigned to 23rd United States Infantry; present position since 1907.

LOUIS BLACK — Donley Building, 222 Pleasant Street

Director of the School of Music and Head of the Department of Vocal Music

Pupil of William L. Whitney, Oreste Bimboni, and Vincenzo Lambardi; Graudate, New England Conservatory, Boston, 1898; Student, New England Conservatory School of Opera, 1897-1901. Instructor, New England Conservatory, 1898-1904: Associated with Lombardi in Italy, 1904; Instructor, Whitney International School, 1904-6; Head, Vocal Department, East Greenwich Academy, 1905-6; Head, Vocal Department, Beaver College, 1906-9; present position since 1909.

WILLIAM JACKSON LEONARD — 36 University Driveway

Associate Professor and Head of the Department of Fine Arts

Student, The Cowles Art School, Boston, 1889-90; Pupil of Jean Paul Laurens and Benjamin Constant, Paris, 1891-3; Student, Academie Julien and Ecole des Beaux Arts, Paris; Special student, Harvard University. Instructor in Fine Arts, West Virginia University, 1900-2; present position since 1902.

SIMEON CONANT SMITH, A.B., A.M. — 107 High Street

Associate Professor of Rhetoric and Instructor in English in the Preparatory School

A.B., Tufts College, 1898; A.M., West Virginia University, 1902; Graduate student, Harvard University, 1903-4. Fellow in Rhetoric and Elocution, West Virginia University, 1899-1900; Instructor in Rhetoric and Assistant in English in the Preparatory School, 1900-6; Assistant Professor of Rhetoric, 1906-9; present position since 1909.

EVA EMMA HUBBARD — 265 Academy Square

Instructor in Drawing and Painting

Graduate, Morgantown Female Seminary, 1876; Student in Mrs. I. P. Wilkinson's Studio, Wheeling, 1881-2. Instructor in Drawing and Painting, Wheeling Female College, 1883-4; Student in Carl Hecker's Art School, New York City, 1884-5; Instructor in Fine Arts, Mountain Lake Park Summer Chautauqua, 1885-8; Instructor in Drawing and Painting. Mrs. M. Stevens Hart's School for Young Ladies, 1894-7; present position since 1897.

GRACE MARTIN SNEE, B.M, — 649 Spruce Street

Instructor on the Piano and Pipe Organ

Graduate, Virginia College for Young Ladies, 1893; B.M., *ibid.*, 1894. Instructor in Piano Department, *ibid.*, 1893-4; Graduate student, Peabody Institute, Baltimore, 1895-6; Assistant on the Piano, West Virginia University, 1897-1901; present position since 1901.

RUDOLF WERTIME — 2 Vance Lane

Head of Piano Department

Pupil in the Royal High School of Music, Berlin, 1894-8, under Professor Raif, Bargiel, Wolff, and Von Herzogenberg. Teacher in the Clinton Liberal Institute, New York, 1898-1900; Graduate work with the Conrad Ansorge, Berlin, 1900-1; Instructor on the Piano, West Virginia University, 1903-9; present position since 1909.

DAVID DALE JOHNSON, A.B., A.M. — 305 Fayette Street

Instructor in English

A.B., Marietta College, 1896; A.M., West Virginia University, 1903; A.M., Marietta College, 1906; Graduate student, University of Chicago, 1899 and 1902, Harvard University, 1908. Instructor in Latin and Sciences, Parkersburg High School, 1896-7; Instructor in German and Latin, Marietta Academy, 1897-8; Instructor in English, Parkersburg High School, 1898-1902; Assistant in English, West Virginia University, 1902-7; present position since 1907.

CLARENCE POST, A.B. 45 Stewart Street

Instructor in Physics

A.B., West Virginia University, 1907; Graduate student, Cornell University, Summer of 1907. Present position since 1907.

MARGARET BUCHANAN, A.B. 304 Willey Street

Instructor in Greek and Mathematics

A. B., West Virginia University, 1906. Teacher in Marshall College, 1906-7; Assistant in Greek and Mathematics, West Virginia University, 1907-9; present position since 1909.

THOMAS BOND FOULK, B.S.C.E. 509 Front Street

Instructor in Mathematics in the Preparatory School and Graduate Manager of Athletics

B.S.C.E., West Virginia University, 1908. Assistant in Mathematics in the Preparatory School and Graduate Manager of Athletics, West Virginia University, 1908-9. Present position since 1909.

WILLIAM HENRY GALLUP 324 Willey Street

Instructor in Mathematics and History in the Preparatory School

A.B., Allegheny College, 1885, A.M., *ibid.*, 1888. Principal, Ward School, Youngstown, Ohio, 1885-8; Principal, High School, Wellsville, Ohio, 1888-91; Superintendent of Schools, New Cumberland, West Virginia, 1891-9; Superintendent of Schools, Morgantown, West Virginia, 1899-1908; Present position since 1909.

MARGARET WINTON HORNE President's House

Instructor in Violin

Pupil of Dr. Joachim and Professor Halir, Hochschule, Berlin, and Professor Sevcik, Prague.

MABEL CONSTANCE FOSTER Madera Hotel

Assistant in Piano

Student in Conservatory of Music, Philadelphia, 1891-2; Pupil of Von Westernhagen, Philadelphia, 1893; Pupil of Elisa Mazzucato Young in Harmony, 1897-1901; Student in Sherwood School of Music, 1901-2; present position since 1902.

LOUISE FERRIS CHEZ 748 North Front Street

Assistant Director of Physical Training, in charge of the Women's Gymnasium

Graduate, Chautauqua School of Physical Education, 1902; Graduate work in Massage and Swedish System. Assistant to Jacob Bolin of New York City in Clinic of Corrective and Orthopedic Gymnastics, 1903; Director of Physical Training for Women, DePauw University, 1901-2; Director of Physical Culture for Women, University of Cincinnati, 1903-4; present position since 1904.

W. A. MESTREZAT 57 Bridge Street, South Morgantown

Assistant in Music (Wind Instruments)

Pupil of W. H. Stowe, G. Oeschsle, and F. B. Heubner. Member 21st United States Infantry Band; Chief Musician, 1st West Virginia Volunteer Infantry, in Spanish War, and 30th United States Volunteer Infantry, in Philippines; present position since 1902.

HELEN LOVELAND TREAT 353 Wilson Avenue
Assistant in Music

Artists' Diploma, School of Music, West Virginia University 1908. Present position since 1908.

SPECIAL SUMMER SCHOOL INSTRUCTORS AND LECTURERS

Session of 1909

EDWARD HOWARD GRIGGS, A.M., (Formerly Professor of Education and Ethics in Leland Stanford University) *Ethics and English Literature.*

J. J. FINDLAY, M, A., PH. D., (Professor of Education in Manchester University, England) *Education*

PERCIVAL CHUBB, (Director of English in the Ethical Culture School, New York City) *English Literature*

MICHAEL VINCENT O'SHEA, B. L., (Head of the Department of Education in the University of Wisconsin) *Education*

WILLIAM M. GIFFIN, A. M., PD. D., (Principal Willard School, Chicago) *Special Methods in teaching Arithmetic and Reading*

CLARA MABEL WHEELER (Horace Mann School, Columbia University) *Primary Department and Observation Classes*

IDA CASSA HEFFRON, (Formerly Instructor in Drawing in the Cook County, Chicago, Normal School) *Public School Drawing, Modeling and Painting*

NEVA AUGUSTA SCOTT, (National Cooking School of Washington, D. C.) *Domestic Arts and Sciences*

JOHN PORTER LAWRENCE, (Director of the Piano Department, National Park Seminary, Washington, D. C.) *Piano and Organ*

ANTON KASPAR, (Concert Master Georgetown Orchestra, Washington, D. C.) *Violin*

CAMDEN M. COBERN, PH. D., D. D., *Head of the Department of English Bible and Philosophy of Religion in Allegheny College*

JOSEPH CLARK, D. D., *General Secretary of the Ohio Sunday School Association*

ARTHUR T. ARNOLD, *General Secretary of the West Virginia Sunday School Asssociation*

JOHN A. McKAMY, *Presbyterian Publishing House, Nashville, Tennessee*

MRS. MARY FOSTER BRYNER, *Field Worker. International Sunday School Association*

AGRICULTURAL EXPERIMENT STATION STAFF

JAMES H. STEWART, A.M. *Director and Agriculturist*	118 Willey Street
BERT HOLMES HITE, M.S. *Vice Director and Chemist*	Peabody Hotel
WELTON MARKS MUNSON, PH.D., *Horticulturist*	25 Wilson Avenue
WILLIAM EARL RUMSEY, B.S.AGR. *Entomologist*	415 Park Street
NAHUM JAMES GIDDINGS, M.S. *Bacteriologist*	216 Cobun Avenue
HORACE ATWOOD, M.S.AGR. *Assistant Agriculturist*	Experiment Station Farm
FREDERICK ERNEST BROOKS *Associate Entomologist*	98 Gaston Avenue
FRANK BATSON KUNST, A.B. *Assistant Chemist*	Garlow Building, High Street
CHARLES EDWARD WEAKLEY, JR. *Assistant Chemist*	415 Park Street
ARTHUR LINCOLN DACY, B.SC. *Assistant Horticulturist*	Buchanan Avenue
JAN HENDRICK BERGHUIS-KRAK *Assistant Chemist*	6 Jones Avenue
OSCAR CHARLES BECK, B.S. *Assistant Chemist*	68 Beverly Avenue
WILLIAM J. WHITE *Clerk*	Marion Street
MARTHA A. STEWART *Librarian*	118 Willey Street
ALICE ENGLE *Secretary*	247 Willey Street

THE SCHOOL OF MUSIC

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*
LOUIS BLACK, *Director, Instructor in Voice*
RUDOLF WERTIME, *Instructor on the Piano and Head of the Piano Department*
MARGARET HORNE, *Instructor on the Violin*
GRACE MARTIN SNEE, *Instructor on the Piano and Pipe Organ*
SUSAN MAXWELL MOORE, *Instructor on the Piano*
MABEL CONSTANCE FOSTER, *Instructor on the Piano and in Harmony and Musical History*
WALTER A. MESTREZAT, *Instructor on Wind Instruments*
HELEN LOVELAND TREAT, *Assistant in Music*

BUILDING AND EQUIPMENT

The school now occupies the entire upper floor of Woodburn Hall, which contains well appointed rooms, supplied with pianos and other accessories. A new recital hall, seating 400 people, has been provided for lectures and students' recitals.

Commencement Hall, seating 1,500 people, contains a magnificent three-manual pipe organ, tubular pneumatic—built upon the universal wind-chest system and containing 76 stops and mechanical accessories. This organ, which receives power from an electric motor, is available for practice.

CONCERTS AND RECITALS

FACULTY CONCERTS

Faculty concerts are given at least three times a year, the last of the yearly series being the Commencement concert. All the members of the School of Music Faculty participate in these concerts though occasionally one member may give an individual recital.

STUDENT CONCERTS

A student's concert is held each week during the school term. These concerts vary in grade from elementary to graduate and post graduate recitals. The object is to afford opportunity for the student to apply in public the proficiency that has been developed in the studio.

CHORAL SOCIETY SERIES

A series of choral society concerts, usually four in number, affords students an opportunity not only of singing the choral works of the great masters but also of hearing the solo artists who are engaged.

Usually two of these concerts are given entirely by visiting artists both instrumental and vocal, the other two being given by the Society assisted by visiting artists.

THE CHORAL SOCIETY

All students of the University who can sing are admitted to the choral society upon payment of fifty cents, the membership fee. For those who are not students the fee is $1.00. These dues admit the members to all concerts of the choral society series.

GENERAL ANNOUNCEMENTS

Students may enter the School of Music at any time, but it is greatly to their interest to enter, as far as possible, at the beginning of the quarter.

Students entering within the first two weeks of a quarter will be charged for full quarter; after that time, for the remainder of the quarter and one week additional.

There is no deduction made for lessons missed by students except in case of prolonged illness, when the loss is divided equally between the student and the school.

Students of the School of Music are not allowed to take part in public programs or in musical organizations without the consent of their respective teachers and the director of the school.

All music students are expected to attend the regular students' recitals, and to take part in them whenever so assigned, and to attend all concerts given under auspices of the University. They are expected to identify themselves with the various organizations of

the school, and are required to enter any to which they are assigned by the director.

It is expected that all students will take sufficient work—literary or musical or both—to occupy their entire time.

CREDIT FOR MUSIC ON COLLEGE COURSES

Credit towards the degree of Bachelor of Arts will be given for courses in the science and history of music, not to exceed two and one-half in number.

COURSES OF STUDY

The School of Music offers instruction in the following subjects: Voice, piano, violin, organ, accompanying, chamber music, orchestra, band music, sight-reading, harmony, counterpoint and musical history. In voice, piano and violin two courses are offered, one of three years, leading to a teacher's certificate and one for four years, leading to an artist's sertificate.

REQUIREMENTS FOR ADMISSION

No student can be classified in the collegiate courses in music without passing an examination in solfeggio, or demonstrating to the satisfaction of the head of the department the ability to read music of moderate difficulty, and giving evidence of the mastery of the elements of music.

In the preparatory courses, to which children only are admitted, no previous knowledge of music is required.

REQUIREMENTS FOR GRADUATION

GENERAL REQUIREMENTS

Candidates for a teacher's certificate in any of the three courses mentioned above must have satisfactorily completed a year's work in High School English or its equivalent. They must also have completed three courses (one year) in harmony.

Candidates for an artist's diploma in any course are required to give a graduating recital. Artistic finish and quality of performance in this recital are decisive factors in determining the award of this diploma.

VOICE

Candidates for the teacher's certificate in vocal music, in addition to the above general requirements, must have satisfactorily completed the three-year course in vocal music as outlined below, and must possess the ability to perform acceptably selections from the standard oratorios and operas. They must also have completed three courses (one year) in each of the modern languages—French, German, and Italian.

Candidates for the artist's diploma in vocal music must satisfy all the general requirements and the requirements for the teacher's certificate, and must have completed the course in the history of music, and the fourth year's work in vocal music.

PIANO

Candidates for the teacher's certificate in piano, in addition to the general requirements, must have satisfactorily completed the three-year course outlined below, including compositions covering the classical and romantic periods, and also the lighter works of some modern composers. They must also have satisfactorily completed the course in the history of music and the course in ensemble playing.

Candidates for the artist's diploma in piano, in addition to the general requirements and the work required for a teacher's certificate, must have completed the four-year course in piano and the course in counterpoint. Particular emphasis is placed upon the graduation recital for students in the piano course.

VIOLIN

Candidates for the teacher's certificate in violin, in addition to the general requirements, must have satisfactorily completed the three-year course in violin music as outlined below, including the concertos of Viotti, Rode, and Kreutzer, and the lighter works of some modern composers.

Candidates for the artist's diploma, in addition to the general requirements and the work required for the teacher's certificate, must have completed the four years' work in violin music, and the course in the history of music. They must also have some knowledge of piano playing.

Students desiring to become candidates for certificates or diplomas should note that while the above mentioned courses are referred to as three-year and four-year courses, no definite period of time

can be assigned for their completion. In all cases certificates and diplomas are awarded on the basis of the proficiency acquired, rather than of the length of time devoted to the course.

DEPARTMENTS OF INSTRUCTION

Strict adherence to a fixed list of studies is not required. The needs of the individual student are considered and the studies varied accordingly. New works are carefully examined by the musical directors and those of value are adopted. An idea of the work covered in the different classes may be obtained from the following.

VOICE

Mr. BLACK

The following is a general outline of work for a student taking only technical work—that is, vocal lessons alone.

First Grade—Technique; scales, arpeggios, etc.; vocalises, Panofka and Concone, Vaccai and Marchesi in Italian. Simple songs in Italian and English.

Second Grade—Technique; scales, Lutgen, Concone, Lamperti, Panofka, etc., Vannuccini in Italian; songs in Italian and English. Ensemble; duets, trios and quartets.

Third Grade—Technique; Bona, Lutgen, Concone, Bordogni, etc., Arias from standard grand operas and oratorios. Ensemble.

Fourth Grade—Technique; Bona, Lamperti, Concone, Aprile, etc., advanced. Oratorio roles, scenes from operas, various songs and arias in preparation for individual recitals. Ensemble.

Sight Reading

A sight-reading class meets for one hour each week, and in this is offered some preliminary work in harmony and notation in their particular relation to singing. This instruction is free to vocal students, and required of them; but to those of other departments a charge of five dollars for the year is made.

PIANO

Mr. WERTIME, Mrs. SNEE, Miss MOORE, Miss FOSTER, and Miss TREAT

The course in this department is intended to meet the varying needs of the individual pupils, with the idea of furnishing a comprehensive, rather than a rigid, inelastic, training in piano-forte

technique. While the acquirement of finger dexterity is necessary, the value and importance of the mental training to be obtained from the study of music is emphasized, and the course is expected to make apparent the advantage of a broad musical education.

The course required of candidates for teacher's certificates or artist's diplomas comprises compositions from the following masters: Bach, Haendel, Haydn, Mozart, Beethoven, Schubert, Weber, Mendelsshon, Schumann, Chopin, Henselt, Liszt, Rubenstein, Brahms, Greig, Saint-Saens, Moszkowski.

Preparatory Piano Course

The School of Music offers a well organized preparatory course, presided over by Miss Susan M. Moore. The beginners' class has two sessions a week, one on Saturday morning, and one on Wednesday afternoon, after school hours. Pupils generally remain in this course for two years, at the end of which time it becomes necessary to give them more individual attention. Children in this department are taught sight-reading transposition, and ensemble playing. They are required to do black-board exercises, and to have a thorough course in ear training.

VIOLIN

MISS HORNE

The mastery of the violin, requiring, as it does, years of specialized effort, tends to restrict students in their musical studies. This course aims to give a thorough training in all the essentials of violin playing, and at the same time to pave the way to a broader, more general culture, which is a part of the true musician's education

The course required of candidates for the teacher's certificate comprises violin schools by David, Spohr, Sevcik; elementary studies and exercises by Wohlfahrt, Dancla, Hermann, Kayser; etudes by Mazas, Kreutzer, Florillo, Rode; selections from De Beriot, Wieniawski, Viotti, Rode, etc.

The course required of candidates for the artist's diploma comprises, in addition to the above, Bach sonatas, concertos by Mendelssohn, Molique, Spohr, Kreutzer, Bruch, etc.

Preparatory Violin Course

A course in violin instruction is offered for children, corresponding to the courses of a similar nature in the vocal and piano departments. Children who have had no training in music are admitted to this class.

PIPE ORGAN

Mrs. Snee

The organ course is intended to provide a thorough and complete education in the work of a church organist and accompanist. Students are required to take some studies on the piano before entering the organ school.

WOOD AND BRASS INSTRUMENTS

Mr. Mestrezat

Opportunity is offered in this course to obtain the instruction necessary to fit one to play the various wood-wind and brass instruments used in orchestras and bands.

ENSEMBLE WORK

Miss Horne

1. **Lessons in Accompanying.** This course is intended to furnish opportunity to advanced students to acquire the art of accompanying songs, violin and cello solos.

2. **Chamber Music.** The study of sonatas, trios and quartettes by Bach, Beethoven, Mozart, Haydn, Mendelssohn, Gade, etc. Open to violinists, 'cellists, pianists and viola players. A preparatory class is also offered, the works to be studied including trios by Reinecke, Bohm, Haydn, and Hellmsberger.

3. **Orchestra Music.** A study of the usual orchestral works and of accompaniments of pianoforte and violin concertos.

CHORUS SINGING

Mr. Black

The choral society meets for rehearsal once each week, and affords opportunity to obtain the pleasure and benefit of chorus singing as well as to acquire familiarity with the field of choral work.

THEORY OF MUSIC

Miss Foster

1. **Harmony.** This course is designed to be a part of the general musical education of all students in the School of Music. It is

of special assistance in the study of the piano, but is of value in every department of musical work. One-third course.

2. **Harmony.** Continuation of course 1. One-third course.

3. **Harmony.** Continuation of course 2. One-third course.

4. **Counterpoint.** This course is of special benefit to pianists and to teachers of music. Prerequisite, courses 1-3 in harmony. One-third course.

5. **Counterpoint.** Continuation of course 4. One-third course.

6. **History of Music.** Knowledge of the origin and development of music is a requisite in a musical education. The course, though not extensive, is designed to acquaint the student with the fundamental and most important facts of the art. One-third course.

7. **History of Music.** Continuation of course 6. One-third course.

MODERN LANGUAGES

The close relation of the modern languages with music, and especially with vocal music, makes them important in every course of musical study. The inexhaustible and ever-increasing treasure of vocal music composed to German, French, and Italian texts makes a fair knowledge and corrct pronunciation of these languages indispensable. The University offers superior advantages for the study of these languages.

TUITION PER QUARTER

The following table shows the rates of tuition for private lessons of thirty minutes in length:

	Number of lessons per week		
	One	Two	Three
Voice:—			
LOUIS BLACK	$15.00	$25.00	$35.00
Piano:—			
RUDOLF WERTIME	15.00	25.00	35.00
GRACE MARTIN SNEE	11.00	18.00	26.00
SUSAN MAXWELL MOORE	11.00	18.00	26.00
MABEL CONSTANCE FOSTER	10.00	16.00	23.00
HELEN LOVELAND TREAT	6.00	10.00	

Violin:—

MARGARET HORNE	11.00	18.00	26.00

Pipe Organ:—

GRACE MARTIN SNEE	15.00	25.00

Wood and Brass Instruments:—

WALTER MESTREZAT	8.00	12.00

Ensemble Classes:—

Accompanying lessons.....$8.00 per term.—
Chamber Music Class .....$4.00 per term.—$10.00 per year.
Orchestral Class .....$2.00 per term.—$5.00 per year.

For two class lessons per week, of thirty minutes each, the tuition is:

In harmony $12.00
In theory and musical history..... 10.00

The tuition for other classes is as follows:

Sight reading (one lesson a week)—$2.00 per term—$5.00 per year.
Preparatory piano music..... 7.50
(Classes of four pupils)
Preparatory violin music 7.50
Public school music 7.50

Piano for practice, one hour per day, will be furnished at $3.50 per quarter; two hours per day, $6.00 per quarter; three hours per day, $8.00 per quarter; four hours per day, $10.00 per quarter. Clavier practice, one hour per day, $3.00 per quarter.

Pipe organ practice, one hour per day, $7.00 per quarter.

No contingent fees are charged music students who take conversational French, German, or Italian, as required for their diplomas in music.

Music students who are residents of West Virginia, and who take work in other departments of the University, are subject to the usual charges for fees in these departments.

Any student in the School of Music who is not a resident of West Virginia, and who pays at least $16.00 a term for music, is permitted to take, in addition to music, one credit course each term free of charge, or two credit courses at one-half the usual charge; but in either case such student shall pay the matriculation fee of $5.00 upon first entering the academic department, and the contingent fee of $3.00 each term.

The fee for a diploma or teacher's certificate is $3.00

Regularly enrolled students in the School of Music are required to pay the following athletic fees: for the Fall term, $2.00; for the Winter term, $1.00; for the Spring term, $2.00.

THE SCHOOL OF FINE ARTS

THE FACULTY

DANIEL BOARDMAN PURINTON, LL.D., *President*
WILLIAM JACKSON LEONARD, *Associate Professor and Head of the Department of Fine Arts*
MRS. EVA EMMA HUBBARD, *Instructor in Perspective Drawing and Painting*

EQUIPMENT

The University provides large, well lighted studios, containing drawing stands, easels, etc., and a large collection of casts and models. Students have access to the University library, which contains a large and carefully selected collection of works on the history and development of the fine arts.

FEES

The regular classes in drawing and the history of art are open without charge to all students of the University, but in the special drawing and painting classes fees are charged, as follows:

For one quarter, three lessons weekly:

Special drawing	$ 5.00
Water color	10.00
China painting	10.00
Pastel painting	10.00
Oil painting	10.00

Students whose work is entirely in this school, and who take private work only, are not required to pay the usual University fees, but are entitled to all the privileges of the other University students —library, lectures, etc. Fees are payable in advance to the bursar of the University for the art fund.

THE REGULAR ART COURSE

This course of four years is so planned that the student may acquire the technique of drawing and painting, a general art education, and a degree of aesthetic culture tending to develop the individual powers of composition and expression.

The work of the first year includes light and shade drawing from the antique, study of perspective, sketching from nature, drawings of still life, and study of form carried out in clay modeling. Color studies are introduced in the spring term.

In the second year the drawing is continued from cast in charcoal and crayon, copying the head, mask, and ornament from the antique. Color studies in water-colors and oil are given with the work in black and white.

During the third and fourth years, the student copies the bust and full length figure from the antique, paints from the draped model in the life class, and studies portrait painting and compensation or sketching from nature, and landscape painting.

REQUIREMENTS FOR DIPLOMA

To those who complete this course of four years' study, making oil painting their major study and including the history of art, a diploma will be given.

ART COURSE FOR TEACHERS

This course is designed for teachers in public or normal schools. It comprises free-hand drawing of ornament, mask, and head from the antique; study of still life, perspective and mechanical drawing; sketching; study of design; study of color and form developed in water-color painting and clay modeling.

Class lectures are given on the teaching of form and color, and the history of art.

Students should spend two years in pursuing this course; but to suit individual needs, the course may be shortened, and what is most essential will be given in the time available.

CREDIT FOR FINE ARTS ON COLLEGE COURSES

Credit toward the Degree of Bachelor of Arts will be given for courses in Fine Arts not to exceed five in number.

COURSES OF INSTRUCTION

Associate Professor LEONARD

1. Elementary Drawing. The historic forms of art and their development. Lectures, with collateral reading and practice in drawing. Fall, 9:30; L.

2. **Elementary Drawing.** A continuation of course 1.
Winter, 9:30; L.

3. **Elementary Drawing.** A continuation of course 2.
Spring, 9:30; L.

4. **Advanced Drawing.** Historic periods of architecture, sculpture, and painting. Lectures, with collateral reading and practice in drawing. Fall, 10:30; L.

5. **Advanced Drawing.** A continuation of course 4.
Winter, 10:30; L.

6. **Advanced Drawing.** A continuation of course 5.
Spring, 10:30; L.

7. **The History of Greek Art,** with a consideration of the arts of Egypt, Assyria, and Phoenicia, in their relation to Greek art.
Fall, 8:30; L.

8. **The History of Mediaeval and Modern Art,** with special consideration of the Renaissance period. Winter, 8:30; L.

Mrs. HUBBARD

9. **Perspective Drawing.** Elementary study of linear perspective; principles of geometrical forms and familiar objects. Honey's Linear Perspective. Fall, 11:30; L.

10. **Perspective Drawing.** A continuation of course 9. Analysis of principles; development and construction of the arch. Minifie's and Spanton's Perspective. Winter, 11:30; L.

11. **Advanced Perspective Drawing.** A continuation of course 10. Isometric drawing; sciography; perspective applied to buildings, use of plan and perspective erection; applications to sketching and topography. Reference books, Spanton and Ware.
Spring, 11:30; L.

12. **Oil Painting.** Color analysis and combinations; painting from still life, fruits, flowers, draperies, etc.; landscape painting; study of the draped model. Hours to be arranged; L.

13. **Pastel Painting.** The various studies of color and design suitable for expression in this medium; special study for pastel portraits and the draped figure. Hours to be arranged; L.

14. **Water Color Painting.** Study from the flat and from nature, still life, landscape or model; design from plant life and conventional; figure and portrait painting. Hours to be arranged; L.

THE SUMMER SCHOOL

TWELFTH SESSION, JUNE 20 TO JULY 30, 1910.

THE FACULTY

DANIEL BOARDMAN PURINTON, Ph. D., LL. D., *President of the University.*

JAMES L. HUGHES, (Chief Inspector of Schools, Toronto, Canada.) *Education.*

ALBERT BUSHNELL HART, Ph. D., LL. D., (Professor of History in Harvard University), *History.*

WALTER COCHRANE BRONSON, A. M., Litt. D., (Professor of English in Brown University), *English Literature.*

O. T. CORSON, (Former State Superintendent of Ohio.) *School Administration.*

MORRIS P. SHAWKEY, A. M., (State Superintendent of West Virginia), *School Administration.*

EDWARD S. COX, Litt. D., (Former Superintendent of Parkersburg Schools).

IDA CASSA HEFFRON, (Former Instructor in Drawing in the Cook County, Chicago, Normal School) *Public School Drawing, Modeling, and Painting.*

CLARA MABEL WHEELER, (Horace Mann School, Columbia University), *Observation Classes, Primary Grades.*

MARTHA DAVIS, A. B., (Teacher in Brooklyn Heights Seminary, New York City), *Observation Classes, Grammar Grades.*

JASPER NEWTON DEAHL, A. M., Ph. D., (Professor of Education in the University), *Education.*

JOHN LEWIS SHELDON, A. M., Ph. D., (Professor of Botany and Bacteriology in the University), *Nature Study; Botany; Agriculture.*

FREDERICK LAWRENCE KORTRIGHT, B. S., D. Sc., (Professor of Chemistry in the University), *Chemistry.*

ROBERT ALLEN ARMSTRONG, A. M., L. H. D., (Professor of English in the University),*English Literature.*

CHAUNCEY WILLIAM WAGGONER, Ph. D., (Professor of Physics in the University), *Physics,*

FREDERICK WILSON TRUSCOTT, A. M., Ph. D., (Professor of Germanic Languages and Literatures in the University), *German.*

FRANK BUTLER TROTTER, A. M., (Professor of Latin in the University), *Latin.*

JAMES MORTON CALLAHAN, A. M., Ph. D., (Professor of American History in the University), *History.*

JOHN ARNDT EIESLAND, Ph. B., Ph. D., (Professor of Mathematics in the University), *Mathematics.*

ARETAS WILBUR NOLAN, A. M., (Assistant Professor of Horticulture, Forestry and Economic Entmology in the University), *Agriculture.*

LLOYD LOWNDES FRIEND, A. M., (Associate Professor of Secondary Education in the University), *Education.*

ARLEIGH LEE DARBY, A. M., (Instructor in Romance Languages in the University), *French; Italian.*

DAVID DALE JOHNSON, A. M., (Instructor in English in the University), *English Language and Composition.*

LOUIS BLACK, (Director of the University School of Music, and Instructor in Voice), *Voice.*

MARGARET HORNE, (Instructor in Violin in the University School of Music), *Violin.*

SUSAN MAXWELL MOORE (Instructor in Piano in the University School of Music), *Piano.*

GRACE MARTIN SNEE, (Instructor in Organ in the University School of Music), *Organ.*

ETHEL BORDEN BLACK, *Piano.*

FACULTY OF THE SCHOOL OF METHODS FOR SUNDAY SCHOOL WORKERS

JUNE 21 TO 26, 1910.

JOHN H. VINCENT, S. T. D., LL. D., *Bishop of the M. E. Church and Chancellor of the Chautauqua System.*

W. C. PEARCE, *Superintendent Adult Department, International Sunday School Association.*

NANNIE LEE FRAYSER, *Lecturer on Elementary Sunday School Work.*

ARTHUR T. ARNOLD, *General Secretary of the West Virginia Sunday School Association.*

MARTHA V. GRAHAM, *Superintendent Elementary Work West Virginia Sunday School Association.*

ANNOUNCEMENTS

The Summer School for 1910 will begin June 20 and continue six weeks—until July 30. Students may enter at any time, but they are earnestly advised to be present from the beginning of the school. The Summer School, like any other term of the University, is coeducational in all its courses.

ADMISSION AND CREDIT

There are no requirements for admission to the Summer School unless the student desires University credit for the work to be done. In such case if he desires to be a special student, he must satisfy his instructors that he is prepared to take the courses selected. If he desires regular classification he must meet the regular University conditions, a statement of which may be found in the University catalogue.

Preparatory or college credit may be had for most of the Summer School work.

Certificates setting forth the work done in the Summer School will be given to those who make application for them to their instructors at the beginning of the term. These certificates are useful to show to members of boards of education and other school officers.

REGISTRATION

Students will register on Monday, June 20, with the Registrar, Room 11, Science Hall. All students, whether previously in attendance at the University or not, must register before entering the Summer School.

Work will begin promptly in all departments on Tuesday, June 21.

FEES FOR THE SUMMER SCHOOL

The entire fee for everything offered in the Summer School (excepting Music and Domestic Science), is $2.50, whether the student be a resident of West Virginia or of some other State; provided that if University credit for the work is desired, a matriculation fee of $5.00 must be paid, unless the student is already a matriculate of the University.

Students from States other than West Virginia who desire to obtain University credit for the summer work will also pay the following tuition: In the College of Arts and Sciences, $6.00; in the Preparatory School, $2.50.

If, however, no University credit is desired, the total fee for students from other States as well as from West Virginia will be only $2.50.

The fees in Music and Domestic Science are stated in the announcements of the courses in those subjects.

LIBRARY AND LABORATORIES

The library is open without break from 8:00 a. m. to 10:00 p. m. every day except Sunday, and on Sunday it is open for reading and the consultation of books from 2:00 p. m. to 5:00 p. m. No books are given out on Sunday.

It is the effort of those in charge to render every possible service to aid students in making profitable use of the books.

The reading room is well supplied with the current periodicals and newspapers—both technical and general—which are free of access to all who wish to make use of them.

The laboratories in chemistry, physics, agriculture, bacteriology, and botany will be in use during the Summer School.

FREE MUSIC RECITALS AND MATIN SERVICE

Six lecture recitals, under the direction of the School of Music, will be given—one each week. Great composers will be

briefly discussed and their works interpreted with voice, piano, violin or organ by Professor Black. Miss Horne, and others. These delightful recitals, given every summer, constitute one of the most enjoyable features of the Summer School. They are free to students and the public.

A brief chapel service will precede these music recitals. They will be held every Wednesday at 11 o'clock in Commencement Hall. During that hour no other exercises will be held in any department of the Summer School.

LIVING ACCOMMODATIONS

Woman's Hall

Miss Susan Maxwell Moore, Dean of Women, will be in charge of Woman's Hall as usual. The building is a very attractive one, pleasantly located, and furnished with every convenience. Write to Miss Moore for information as to rates, and to engage rooms.

Chapter Houses For Young Women

Co-operative living among young women students at the University has been found to be satisfactory and so cheap that two Chapter Houses—the Sigma Chi and the Phi Sigma Kappa—will be used for this purpose this summer. Miss Pearl Compton will have charge of the former and Miss Mahala D. Prichard of the latter, but the Dean of Women will have general control. Both of these Chapter houses are beautiful new buildings, standing at the edge of the University campus. One of them will accommodate seventeen and the other fourteen young ladies. Not only can their living expenses be made very light, but the living conditions are exceedingly pleasant.

To obtain information and to engage rooms write to Miss Compton or Miss Prichard at Morgantown.

Other Places

Most of the rooming and boarding places in town are open during the summer at reasonable rates. The two Christian Associations of the University have charge of the work of helping students to find suitable accommodations. Committees of these associations will gladly meet students at the railway station or at the wharf and conduct them to their rooms. Letters of inquiry about rooming and boarding addressed to the President's office at the University will be put into proper hands.

EDUCATIONAL CONFERENCE

The eighth annual two-days Educational Conference, under the auspices of the University Summer School, will be held Friday and Saturday, June 22 and 23, in Commencement Hall. The topic this year will be "School Administration."

All persons interested in this topic are cordially invited to be present and take part in the discussions. These educational conferences have proved to be of great importance in their relation to West Virginia educational questions. State Superintendent Shawkey, of West Virginia, and former Superintendent Corson, of Ohio, will take part in the conference.

SUMMER SCHOOL CONVOCATION

The convocation exercises of the Summer School will be held Tuesday evening, June 20, at 8:30 o'clock, in Commencement Hall. The Convocation address will be delivered by John H. Vincent, S. T. D., LL. D., Bishop of the M. E. Church and Chancellor of the Chautauqua System. Music will be furnished by the School of Music.

For information concerning any department of the Summer School, or for catalogue of the University, write to Waitman Barbe, or to the President.

D. B. PURINTON, PH. D., LL. D.,
Morgantown, West Virginia.

SCHEDULE OF COURSES BY HOURS

8:00 A. M.

History of Modern Education—L. L. Friend.....19 W
English Bible—R. A. Armstrong .....24 W
Fundamentals of English Grammar—D. D. Johnson.....13 W
Landmarks of English History—J. M. Callahan..... 4 M
Botany—J. L. Sheldon .....N. F.
Elementary Physics—C. W. Waggoner .....11 S
Caesar—F. B Trotter .....21 W
Elementary German—F. W. Truscott.....18 W

9:00 A. M.

Public School Drawing and Painting—Ida C. Heffron.....14 W
Studying and Learning and Teaching—J. N. Deahl.....12 M
Shakespeare—R. A. Armstrong .....24 W
College Composition—D. D. Johnson .....13 W
American Social and Economic History—J. M. Callahan..... 4 M

Elementary Agriculture—A. W. Nolan.....25 M
Elementary Latin—F. B. Trotter.....21 W
Elementary French—A. L. Darby.....11 W
German Prose and Composition—F. W. Truscott.....18 W
Algebra—J. A. Eiesland.....16 W

10:00 A. M.

Psychology and Mind Development—J. N. Deahl.....12 M
English Lyrics—R. A. Armstrong .....24 W
Secondary School English—D. D. Johnson.....13 W
History: United States as a World Power—J. M. Callahan.... 4 M
Nature Study—J. L. Sheldon.....14 S
Arboriculture—A. W. Nolan.....25 M
Entomology—A. W. Nolan .....25 M
Caesar or Virgil—F. B. Trotter .....21 W
Practical French—A. L. Darby.....11 W
Elementary German—F. W. Truscott .....18 W
Plane Trigonometry—J. A. Eiesland .....16 W

11:00 A. M.

High School Administration—L. L. Friend .....19 W
History, Special Lectures—J. M. Callahan ..... 4 M
Advanced Agriculture—A. W. Nolan .....25 M
General Chemistry—F. L. Kortright.....20 S
Livy or Horace—F. B. Trotter.....21 W
French Fiction of the Nineteenth Century—A. L. Darby....11 W
Plane Geometry—J. A. Eiesland.....16 W
Public School Drawing and Painting—Ida C. Heffron.....14 W

8:30--11:30 A. M.

Observation Classes—Clara M. Wheeler and Martha Davis....10 M

HOURS TO BE ARRANGED.

Systematic Botany of Vascular Plants—J. L. Sheldon.....N. F.
Synthetic Inorganic Chemistry—F. L. Kortright.....22 S
Chemistry—Quantitative Analysis—F. L. Kortright.....22 S
Public School Drawing Conferences—Ida C. Heffron.....14 W

1:00 P. M.

Experimental Physics—C. W. Waggoner .....12 S
Advanced Physical Laboratory—C. W. Waggoner.....12 S
Chemistry—Qualitative Analysis—F. L. Kortright.....22 S
Chemistry—Elementary Quantitative Analysis—F. L. Kortright .....22 S
Chemistry—Analysis of Coal, Coke and Water—F. L. Kortright .....22 S

2:00 P. M.

Administration and Supervision of Schools—J. N. Deahl.....12 M

3:00 P. M.

Lectures by J. L. Hughes, A. B. Hart, W. C. Bronson, O. T. Corson, M. P. Shawkey and E. S. Cox.

4:00 P. M.

Organization, Inspection and Supervision of Country Schools —J. N. Deahl and L. L. Friend.....12 M
Field Work in Botany and Nature Study—J. L. Sheldon.....
Field and Garden Work in Agriculture—A. W. Nolan.....25 M
Public School Drawing and Painting—Ida C. Heffron.....14 W

8:30 P. M.

Lectures by J. E. Hughes, A. B. Hart, W. C. Bronson, O. T. Corson, M. P. Shawkey and E. S. Fox.....C

COURSES OF INSTRUCTION

All Courses Extend Throughout the Entire Six Weeks, Unless Otherwise Stated.

The abbreviations are: M., Martin Hall; W., Woodburn Hall; S., Science Hall; L., Library; C., Commencement Hall; E., Experiment Station; N. F. North Fife.

The numbered courses are taken from the regular University catalogue; the lettered courses are special Summer School courses.

EDUCATION

JAMES L. HUGHES

During the week beginning June 27, Chief Inspector James L. Hughes of Toronto, Canada, will give a course of lectures on the following subjects:

1. Modern tendencies in education.
2. The bad boy.
3. Evils of coercion.
4. Educational value of play.
5. Development of imagination.

June 27 to July 2, 3:00 p. m.; 14 M.

Director Hughes will also give two evening lectures as follows:

1. The old training and the new.
2. Dickens as an educator.

Tuesday and Thursday, 8:30 p. m.; C.

Conference daily except Wednesday, 11:00 a. m.; 14 M.

O. T. CORSON

During the week beginning July 18, Hon. O. T. Corson, former school commissioner of Ohio, will give a course of lectures and conduct daily conferences on the subject of country school administration. His topics will be:

1. The relation of superintendent to teachers.
2. The teacher's surplus.
3. Some pressing problems in school administration.
4. Originality in the teacher.

July 19 to 23, 9:00 a. m. or 3:00 p. m.; 14 M.

Mr. Corson will also give two evening lectures as follows:

1. The foundation of success.
2. The foundation of happiness.

Tuesday and Thursday, 8:30 p. m.; C.

M. P. SHAWKEY

During the same week, viz., the week of July 19, Hon. M. P. Shawkey, State Superintendent of West Virginia, will give four lectures on school supervision. His topics will be:

1. Teachers' meetings and what should be done in them.
2. Profitable school visits.
3. The business end of it.
4. Real leadership.

July 19 to 23, 9:00 a. m. or 3:00 p. m.; 14 M.

Conferences—At 10:00 A. M. and 4:00 P. M. during this week a conference on "County and District Supervision" will be conducted in No. 14 Martin Hall by Mr. Corson and Mr. Shawkey alternately.

JASPER NEWTON DEAHL

A. Studying and Learning and Teaching. Required reading, recitations, discussions, observations of pupils studying and teachers teaching, reports and practice work. This course will aim to present some principles that will secure economic studying and learning and effective teaching. The observation classes will be used to get the data and facts to be developed in the course. One-half course credit. 9:00 a. m.; 12 M.

B. Psychology and Mind Development. Required reading, recitations, discussions, reports and conferences. This course will aim to present a systematic treatment of mental development and the modern basis of education theory. One-half course credit.

10:00 a. m.; 12 M.

C. Administration and Supervision of Schools. This course is a continuation of Education 6 offered in 1909. It was given in the summer school of 1906. It is primarily for principals and superintendents of schools. It will include the study of the following topics:

1. Business and educational control of schools.
2. The functions of the school principal.
3. School inspection—urban and rural.
4. The teachers' meeting and conference.
5. Lesson plans and reports.
6. The organization of the school.
7. Standards in school for pupils and teachers.
8. Attendance and progress in school.
9. English in the elementary and high school.

One-half course credit, 2:00 p. m.; 12 M.

C. **Organization, Inspection, and Supervision of Country Schools.** This course will make a study of the chief problems of rural schools including such topics as, organization, programs of studies, the teacher and the teaching, the learner and the learning, inspection and supervision, etc. The course is primarily for county and district superintendents of schools.

4:00 p. m.; Professor DEAHL and Professor FRIEND, 12 M.

LLOYD LOWNDES FRIEND

D. **The History of Modern Education.** The work of this course will center around four great educational Reformers,—Pestalozzi, Herbart, Froebel, and Horace Mann. The educational theories of each will be studied with special reference to the influence each exerted upon the educational ideals of his time and the influence each has had upon the educational thought and practice of the present day. The course will consist of lectures, class discussions, prescribed readings and reports. 8:00 a. m.; 19 W.

E. **High School Administration.** This is a short course intended primarily for high school principals and teachers. A brief survey of the history of the American high school at the beginning of the course, will be followed by a consideration of the function of the high school, programs of studies, and the reorganization and management of high schools. The course will close with a study of some present day problem in high school administration. The work will consist largely of class discussions and reports.

OBSERVATION CLASSES—PRIMARY AND GRAMMAR GRADES

CLARA MABEL WHEELER and MARTHA DAVIS

The observation classes will be conducted by Miss Clara M. Wheeler of Horace Mann School, Teachers College, Columbia University, and Miss Martha Davis, of Brooklyn Heights Seminary, Brooklyn, N. Y. They will consist of lessons given to pupils of first, third and sixth grades for the observation and criticism of teachers who desire to take this work. Special study will be made of the selection of subject matter, togther with its organization, preparation and presentation; also of the principles illustrated by the specific lessons. Methods of teaching children how to study, and various mediums of expression, including dramatization, hand-work and seat-work, will be considered.

The recitation periods of the classes for observation will not exceed thirty minutes. Students taking the observation work can,

therefore, adapt it to their courses in other subjects so as to have no conflicts.

A. **Class of First and Third Year Pupils.**
8:30 to 10:00; 10 M.

B. **Classes of Sixth Year Pupils.** 10 to 11:30; 10 M.

C. **Conferences.** Miss Wheeler will meet the observers for a number of conferences upon the work illustrated with the classes of children. Topics for these conferences are given above. 10 M.

Two periods a day should be the maximum time spent in observation work. Every student in the Summer School should do some regular, systematic class work, academic or professional, or both. Those who observe but do no class work should, at least, devote a part of their time to systematic reading in the library on the subjects of their observation work. Students desiring certificates for observation work will be required to do some reading and reporting on the lessons observed.

ENGLISH LITERATURE

WALTER COCHRANE BRONSON

During the week beginning July 4, Professor Walter C. Bronson, head of the Department of English in Brown University, will give a course in Milton as follows:

1. The young Puritan.
2. The early poems.
3. The prose works.
4. "Paradise Lost."
5. "Paradise Regained," and "Samson Agonistes."

July 4 to July 8, 3:00 p. m.; 14 M.

Professor Bronson will also give three evening lectures as follows:

1. Science and poetry.
2. The Indian in American literature.
3. Emerson's Journals.

Tuesday, Thursday, and Friday, 8:30 p. m.; C.

EDWARD S. COX

During the week beginning July 25, Dr. Edward S. Cox of Parkersburg, West Virginia, will lecture on "The New England Group of American Authors." His special topics will be:

1. Emerson.
2. Longfellow.
3. Hawthorne.
4. Holmes.
5. Lowell. July 25 to 30, 3:00 p. m.; 14 M.

Dr. Cox will also give two evening lectures as follows:

1. Browning.
2. Tennyson. Tuesday, and Thursday, 8:30 p. m.; C.

ROBERT ALLEN ARMSTRONG

50. The English Bible. A study of the English Bible as literature; discussion of its literary forms and interpretation of some of its masterpieces; class work largely lectures; assigned readings for those who wish credit. One-half course credit.
8:00 a. m.; 24 W.

40. Shakespeare. The aim of this course is to develop the power to read Shakespeare with intelligent appreciation. A small number of plays will be read, with some attention to verbal difficulties, but with special attention to characters and plot development; assigned readings for those who wish credit. One-half course credit. 9:00 a. m.; 24 W.

A. Poetry—English Lyrics. A study of a number of the most noted lyric poems of English literature with reference to form, thought, imagination, beauty, and emotion; readings and reports on assigned topics for those who wish credit. 10 a. m.; 24 W.

DAVID DALE JOHNSON

B. Secondary School English. A course in practical composition and study of English classics adapted as far as possible to the needs of the students who apply. Recitations, assigned reading and exercises in composition. Students who take the course with the idea of substituting it for work in English 8 or English 9 in the Preparatory School should consult the instructor before registering. One-half course credit. 10:00 a. m.; 13 W.

C. The Fundamentals of English Grammar. An outline study of English grammar with special reference to the structure of the sentence. No credit. 8:00 a. m.; 13 W.

10. Composition (College). Study of brief text-book; daily themes prepared and presented; class composition; daily criticism and discussion of written exercises. One-half course credit.
11:00 a. m.; 13 W.

HISTORY

ALBERT BUSHNELL HART

During the week beginning July 11, Dr. Albert Bushnell Hart, head of the department of history in Harvard University, will give a course of lectures on "America in the Orient," as follows:

1. Japan.
2. China.
3. The Philippines.
4. The English Colonies.
5. Russia.

July 11 to 16, 3:00 p. m.; 14 M.

Professor Hart will also give two evening lectures, as follows:

1. Round the world (illustrated).
2. (Subject to be announced.)

Tuesday and Thursday, 8:30 p. m.; C.

JAMES MORTON CALLAHAN

26. The United States as a World Power; Its Development and its Problems. A study of the relations of the United States to the great drama of the world politics, the fundamental principles of American foreign policy, and America's influence in international law and diplomacy, as determined or affected by circumstances of geography, national character, tradition, economic and social conditions, and historical development from 1776 to 1909, and as reflected in international negotiations, treaties, conventions, conferences and arbitrations to which the United States has been a party. The entire study is developed from the standpoint of the living problems of the present. For mature students who are familiar with the outlines of American history. One-half course credit.

10:00 a. m.; 4 M.

29. American Social and Economic History. The story of the economic achievements of the American people whose westward expansion and other changing conditions of environment constantly compelled new social and industrial adaptations and promoted ingenuity and energy of character. The study forms an educational historical basis that is essential to a thorough understanding of political history and the study of economics. Beginning with the exploration and settlement that led to English colonization, the student traces the growth and expansion of manufactures, agriculture, commerce, transportation, population, and labor from the simple agricultural communities of the English colonies to the complex industrial and commercial organization of today. He

learns how to acquire the information which is a necessary preliminary for the solution of present day social, industrial, financial, and commercial problems. One-half course credit.

9:00 a. m.; 4 M.

4. **Landmarks of English History.** A survey of the more important periods of English history and the most significant facts of social and industrial development in their relation to political and institutional history and the interpretation of present conditions. An educational study of the enlargement of English life and the growth of English institutions. A preparatory course needed as a foundation or background for the study of American history. One-half course which may be extended to a full course by additional readings. 8:00 a. m.; 4 M.

A. Special lectures and conferences.

(1.) On Monday of each week at 11:00 a course of special lectures on the **Makers of the Nation**—a story of the men who laid the foundations and frame-work of the American nation—designed especially for teachers in the public schools, will be offered. In these lectures great events of American history are grouped around the life stories of great leaders and heroes who were the representative men of their periods and practical suggestions are given for bringing to students in the most concrete way the great milestones, the most picturesque landscapes and the most dramatic movements of American history.

(2.) On Thursdays at the same hour a series of studies on special subjects illustrating the development of various phases of American history will be presented.

(3.) On Tuesdays and Fridays students in the regular history classes, and teachers attending other classes in the Summer School, are given an opportunity for a conference for the consideration of special topics in connection with regular class work, consultation in regard to investigations in state and local history, the discussion of the proper materials, tools and methods of historical study and instruction, and the inspection of text-books, maps and various pedagogical aids and devices necessary or useful for properly equipped teachers of history and civics in the secondary schools. No credit.

4 M.

BOTANY AND NATURE STUDY

JOHN LEWIS SHELDON

A. Botany. The work offered in this course will include a study of some of the common plants growing in West Virginia,

such as pond-scums, bacteria, yeasts, molds, mildews, rusts, smuts, mushrooms, liverworts, mosses, ferns, conifers, grasses, sedges, and other seed plants. Special emphasis will be given to those of importance in the home, and in their relation to agriculture, horticulture, and forestry. Students will collect many of the plants for study. One course credit.

Class or laboratory work, 8:00-10:00 a. m. daily; field or laboratory work, 1:00-3:00 p. m., Monday, Wednesday, and Friday. or 1:00-4:00 p. m. Tuesday and Thursday. N. F.

5. **Systematic Botany of Vascular Plants.** Practice in description, identification, and classification. Field and laboratory work with frequent conferences. One-half or one course credit.

Hours by appointment. N. F.

C. **Nature Study.** This course in nature study will be arranged for those who expect to teach nature study or elementary agriculture in the public schools. A portion of the time will be used for informal talks on methods of presenting the subject, but more emphasis will be given to a study of objects at first hand, either in the class-room or field, than to a study about objects. One-half course cerdit.

Class work, 10:00 a. m., daily; field or laboratory work, 4:00 p. m., Monday, Wednesday, and Friday.

A strong pocket knife and a hand lens will be found useful for field work in botany and nature study.

The following and similar texts are recommended for reference:

Bergen: Foundations of Botany. Essentials of Botany.
Bergen and Davis: Principles of Botany.
Coulter: Plant Studies. A Text-Book of Botany.
Andrews: Botany All the Year Round.
Robinson and Fernald: Gray's New Manual of Botany.
Britton: Manual of the Flora of the Northern States and Canada.
Hodge: Nature Study and Life.
Holtz: Nature Study.
Cummings: Nature Study.
Schmucker: The Study of Nature.

AGRICULTURE

ARETAS WILBUR NOLAN

A. **Elementary Agriculture.** A course for public school teachers. Studies in the principal topics of agriculture; soils and ferti-

lizers; the plant and its life relations; vegetable and fruit culture; elements of forestry; insects, their injury and treatment; domestic farm animals; rural economics, etc. One-half course credit.

Lectures, text-book, laboratory and field work, 9:00 a. m.
Field and garden work, Thursday and Friday, 4:00 p. m.
25-27 M.

B. Advanced Agriculture. A course for students who have taken elementary agriculture. A year's work of high school agriculture covered in this course. Intensive studies of the more important topics of general agriculture. One-half course credit.

Lectures, text-book, laboratory and field work, 11:00 a. m.
Field work, Monday and Tuesday, 4:00 p. m.; 25-27 M.

C. Arboriculture. A course given to the consideration of the elementary principles of forestry, orchard management, landscape gardening, and tree surgery.

Lectures, text-book, and practical work. One-half course credit.

1. Entomology. Studies of the life history, gross anatomy, habits and life relations of the more important types of the orders of insects. Economic relations of our insect friends and enemies. Lectures, textbook, laboratory and field work. One-half course credit. 10:00 a. m.; 25-27 M.

Note—Courses "A," and "B" will be given and either course "C" or "1," depending up on the demand.

PHYSICS

CHAUNCEY WILLIAM WAGGONER

A. Elementary Physics. This course is intended for teachers of physics in secondary schools. It consists of lectures and demonstrations. The work in this course for the summer school is divided into two groups. Group 1—Mechanics and Heat; group 2—Electricity and Light. Only one group will be given in 1910, and the choice will be left with the majority of those taking the work. One-half course credit. 8:00 a. m.; S.

Experimental Physics. This course consists of a graded series of experiments such as one would find in a first class high school. The object of this course is to acquaint teachers with the various methods of conducting laboratory work. Particular stress will be placed upon the cost and construction of laboratory apparatus suitable for high school work; and if possible the student will be asked

to construct some pieces of apparatus for laboratory or demonstration purposes. One-half course credit. 1:00 to 3:00 p. m.; 12 S.

16. Advanced Physical Laboratory. A course in precise measurements in physics open to students who have had the necessary prerequisites in physics and mathematics.

1:00 to 3:00 p. m.; 12 S.

Students desiring other work than that outlined in the foregoing courses will be accommodated if the time of the instructor will permit.

CHEMISTRY

FREDERICK LAWRENCE KORTRIGHT

A. General Chemistry. This course is designed for beginners and serves as a general introduction to chemical study. It is general rather than technical in its nature. It includes the study of some of the more important elements and special attention is directed to the application of chemistry to agriculture, botany, geology and other scientific branches of study. The course is especially adapted to the needs of science and nature study teachers. Instruction is given by lectures and these are fully illustrated by experiments. One-half course credit. 11:00 a. m.; 20 S.

B. Synthetic Inorganic Chemistry. A laboratory course for teachers of chemistry and others wishing to supplement previous work in general chemistry. Courses 1 and 2 of the University Catalogue or their equivalent are prerequisite.

Hours to be arranged.

4 and 5. Qualitative Analysis. A laboratory course treating of the separation and detection of the more common elements.

1:00 p. m.; 22 S.

6. Elementary Quantative Analysis. This course includes a small number of simple gravimetric, volumetric and electrolytic determinations, together with the study of the operations involved.

1:30 p. m.; 22 S.

7. Analysis of Coal. Coke and Water. This is a course designed especially for engineering students, but open to others who have the necessary preliminary training. 1:00 p. m.; 22 S.

9. Quantitative Analysis. Students registering for this course will be assigned such work as they are prepared to do. Hours to be arranged. 22 S.

Note—The work in chemistry will be adjusted as far as possible, to meet the individual needs of the students, and credit will be given in proportion to the amount of work done.

LATIN

FRANK BUTLER TROTTER

1. Elementary Course. For beginners and those who wish to review. Beginning and more advanced divisions will be organized if called for by a sufficient number of students. One-half course credit. 9:00 a. m.; 21 W.

4. Caesar. For those who are preparing to teach elementary Latin. Indirect discourse, and drill on constructions. One-half course credit. 8:00 a. m.; 21 W.

6 or 8. Cicero or Virgil. For those who wish credit on regular courses 6, 7, or 8. One-half course credit. 10:00 a. m.; 21 W.

11 or 17. Livy or Horace. University work for freshmen. Work will be given in the one author for which there is the larger demand. One-half course credit. 11:00 a. m.; 21 W.

FRENCH

ARLEIGH LEE DARBY

1. Elementary Course. Grammar, reading and composition. Stress is laid on the pronoun and the conjugation of the verb. Constant practice in pronunciation and oral understanding. Fraser and Squair's French Grammar; Aldrich and Foster's French Reader. 9:00 a. m.; 11 W.

A. Practical French. The aim of this course is the practical application of the French language in composition and conversation. Translation is limited to collateral reading. Careful attention is given to forms and pronunciation. Open to students who have had from one to three years in French. 10:00 a. m.; 11 W.

4. Fiction of the Nineteenth Century. Reading in class of Balzac's Contes, Merrimee's Colomba and George Sand's La Petite Fadette. Reading outside of class of one or two works of the same period. Composition once a week. 11:00 a. m.; 11 W.

Note:—Demands for other courses in French will be met as far as possible.

GERMAN

FREDERICK WILSON TRUSCOTT

1. **Elementary German.** For beginners. The elements of the grammar and reading of easy prose. Practice and pronunciation. One-half course credit. 8:00 a. m.; 18 W.

5. **German prose and composition.** For those who have had at least three courses in German. Rapid reading of prose by modern authors. Translation of English into German. Review of the grammar. Practice in oral understanding. One-half course credit. 9:00 A. M.; 18 W.

1. **Elementary German.** For those who have had one-half course in German. A continuation of the course offered at 8:00 o'clock. Completion of the grammar, reading, and exercises in elementary composition. One-half course credit. 10:00 A. M.; 18 W.

Note. Students who desire courses in German, other than those offered here are requested to consult the instructor.

MATHEMATICS

JOHN ARNDT EIESLAND

3. **Algebra.** Review up to quadratic equations. Quadratic equations and graphic algebra. 9:00 a. m.; 16 W.

5. **Plane Geometry.** Review course. Exercises in algebraic geometry. 11:00 a. m.; 16 W.

Plane Trigonometry. Development of formulae. Solution of trigonometrical equations; antitrigonometric functions; practical exercises and problems. 10:00 a. m.; 16 W.

Note:—Courses other than those announced above will be given if the time of the instructor permits. An effort will be made to give whatever is called for.

PUBLIC SCHOOL DRAWING, MODELING AND PAINTING.

IDA C. HEFFRON

The lessons include: Nature study drawing and painting; rapid sketching on the blackboard illustrating stories and myths; drawing of imaginary scenes and maps, as aids to the teaching of history and literature; geographic drawings of typical surface features; plains, valleys, mountains, glaciers, canons, shore features, islands, etc.; pictorial representations of large sections of

continents, plateaus, mountain systems and river basins; chalk modeling of maps and sections of continents—showing surface structures in relief; sand and putty modeling as a help in teaching geography; hints on making plaster casts; clay modeling with and without models in relation to nature study, history and literature; sketching in water colors, pencil, charcoal, and pen and ink; outdoor sketching; invention and design; the making and use of stencils.

Especial emphasis will be laid on the modeling of maps, the painting of flowers, birds and insects—and clay modeling of the human figure.

The student will be led to do purely original and creative work in each class division.

These subjects, enumerated above, will be grouped and taught under three headings, as below:

Drawing.

Nature study drawing, landscape sketching, rapid sketching on blackboard, geographic drawing, chalk modeling of maps, drawing of the human figure. The mediums used will be crayon, charcoal, pencil, and pen and ink.

Painting.

Nature study painting, of forms and tints of plant and animal life, fruits and flowers. Out of door sketching of landscapes, including the human figure. Invention and Design applied to ornamentation for the school room and home. The making and use of stencils. Watercolors will be the medium used.

Clay Modeling.

Nature study modeling, of forms of plants, fruits and animals. History and literature aids, as making typical houses, dishes, statuettes of historical characters. Sand and putty modeling of maps and surface geographical forms. Hints on coloring the clay, on glazes, and on firing the clay. Making of plaster moulds and casts.

A. First Class.	8:00 a. m.	14 W.
B. Second Class.	4:00 p. m.	14 W.
C. Advanced Class.	11:00 a. m.	14 W.

D. Round-table or Conference. Periods for discussion of the individual needs of the students.

Hours to be arranged. 14 W.

Classes "A" and "B" are open to all; Class "C" is open only to those who have previously taken work with Miss Heffron.

HOUSEHOLD ECONOMICS.

NEVA A. SCOTT.

The following courses in household economics will be given during the entire six weeks of the Summer School:

A. Cookery.
B. Dietetics.
C. Sewing.
D. Millinery.

The fee charged for the entire six weeks course in these four subjects is $10.00; for any one part of course, $3.50; single lessons, 50 cents.

MUSIC

Voice and Sight Reading

LOUIS BLACK

Mr. Black is Director of the School of Music in the University. Individual instruction is offered in voice, either three, two or one lesson a week during the six weeks as the pupil may desire. A class is organized in sight reading. The "movable do" method is employed. This method is practical and has been successful in practical work for many years, particularly in public schools. The work will embrace some fundamental drill in harmony.

Piano

ETHEL BORDEN BLACK and SUSAN MAXWELL MOORE

Mrs. Black is a graduate of the New England Conservatory of Music and was for several years a teacher in that institution. She has been a pupil of J. Wallace Goodrich, Dr. Albert Jeffry and Carl Baerman.

The intermediate and children's classes in piano are in charge of Miss Moore, a member of the School of Music faculty.

Violin; Ensemble Classes

MARGARET HORNE

Miss Horne is instructor on the Violin in the School of Music.

Pipe Organ

GRACE MARTIN SNEE

Mrs. Snee is a member of the School of Music faculty.

Harmony

SUSAN MAXWELL MOORE

HISTORICAL LECTURE RECITALS

Six recitals will be given during the progress of the Summer School at which the Director of the School of Music will give lectures illustrated by programs; a great composer, school or epoch being considered at each recital.

RATES OF TUITION

Voice

Mr. BLACK

Six weeks, three lessons a week.....$25.00
Six weeks, two lessons a week.....$18.00
Six weeks, one lesson a week.....$10.00

Piano

Mrs. BLACK

Six weeks, three lessons a week.....$25.00
Six weeks, two lessons a week $18.00
Six weeks, one lesson a week.....$10.00

Miss MOORE

Intermediate, six weeks, three lessons a week.....$18.00
Children's class, six weeks, three lessons a week.....$10.00

Violin

MISS HORNE

Six weeks, three lessons a week.....$18.00
Six weeks, two lessons a week.....$12.00
Six weeks, one lesson a week.....$ 8.00

Pipe Organ

MRS. SNEE

Six weeks, three lessons a week.....$25.00
Six weeks, two lessons a week.....$18.00
Six weeks, one lesson a week.....$10.00

Ensemble and Accompanying

MISS HORNE

Six weeks, three lessons a week.....$18.00
Six weeks, two lessons a week.....$12.00
Six weeks, one lesson a week.....$ 8.00

Sight Reading

MR. BLACK

Six weeks, three lessons a week.....$ 4.50

Harmony

MISS MOORE

Six weeks, three lessons a week.....$10.00

Pianos for Practice

One hour per day for six weeks, $2.50.
Two hours per day, for six weeks, $4.00.
Three hours per day for six weeks, $5.00.
Clavier practice for six weeks, one hour per day, $1.00.
Organ practice, twice the cost of piano practice.

All tuition and other fees are payable in advance. Sheet music is provided for the cost of handling. Students can enter at any time; a slight reduction will be made for the time not taken in the full course.

SCHOOL OF METHODS FOR SUNDAY SCHOOL WORKERS

The sixth session of the School of Methods for Sunday School Workers will be held at West Virginia University from June 21 to 26, 1910. As usual it will be held in connection with the University Summer School, but neither interferes with the other; indeed, each is of great benefit to the other.

No tuition fee is charged. A registration fee of one dollar is charged, but students registered in the regular Summer School are not required to pay even this nominal fee.

The purpose of the School of Methods is to give pastors, Sunday School superintendents and teachers an opportunity to be instructed in the most modern principles and methods of Sunday School work by some of the leading Sunday School workers of America.

International Recognition

The International Department of Education will grant certificates to students according to the following standard:

A. Attendance of the student for at least 15 hours of the work.

B. Recommendation by the management of the school, based upon approval of note-books, or such other examination as they may require.

Attendance at the study hour will have weight with the management of the school in recommending students for recognition.

The detailed program is published in a separate pamphlet which may be had for the asking. The week will be filled with instruction of great practical value to all Sunday School superintendents, teachers, and others engaged in Sunday School work. For program of School of Methods for Sunday School Workers write to President Purinton, Morgantown, W. Va., or Arthur T. Arnold, General Secretary West Virginia Sunday School Association, Wheeling, W. Va.

THE PREPARATORY SCHOOL

THE FACULTY

ALFRED JARRETT HARE, A.M., *Principal and Professor of the Latin Language and Literature*
HARRY ANTHONY EATON, A.B., LL.B., *Captain U. S. Army, Professor of Military Science and Tactics and Commandant of Cadets*
WILLIAM JACKSON LEONARD, *Associate Professor of Fine Arts*
ANTHONY WENCEL CHEZ, A.B., *Director of Physical Training*
SIMEON CONANT SMITH, A.M., *Instructor in English*
DAVID DALE JOHNSON, A.M., *Instructor in English*
CLARENCE POST, A.B., *Instructor in Physics and Physical Geography*
THOMAS BOND FOULK, B.S.C.E., *Assistant in Mathematics*
MARGARET BUCHANAN, A.B., *Assistant in Greek and Mathematics*
LOUISE FERRIS CHEZ, *Assistant Director of Physical Training*
WILLIAM HENRY GALLUP, *Assistant in Mathematics and History*
ROBERT LEE COLE, *Student Assistant in History*

Note:—Instruction in modern languages and in natural sciences is carried on in connection with the classes in these subjects in the College of Arts and Sciences.

ADMISSION AND SCHOLARSHIP

This is distinctly a preparatory school and aims primarily to prepare young men and young women for the freshmen class of the University. The course of study is such, however, that any one who has successfully completed it, will have received a fairly liberal education.

Thoroughness is imperatively insisted upon in every department, and a high quality of the work rather than the quantity thereof is uniformly demanded. The standard of scholarship is such that only young people of studious habits, reasonably fair ability, and a willingness to work should seek admission. A young man or woman who has a record of failure in other schools is not likely to succeed here.

The discipline is mild and reasonable, but firm. Young people who do not care to study and to deport themselves as ladies and gentlemen will be summarily dismissed.

Special pains are taken by the principal and his assistants to render the school life valuable and pleasant to those who are under their care. Preparatory students have all the advantages of the University library, lectures, cadet corps, gymnasium, athletic grounds, etc.

Candidates for admission must be at least fifteen years of age, and must have credit for at least three units out of the fifteen units required for admission to the College of Arts and Sciences. Applicants for admission from an accredited preparatory school will receive credit for work done in such school upon the presentation of a correct application blank properly filled out and signed by the head of the school.

After September 1, 1910, candidates for admission must have credit for at least six units out of the fifteen units required for admission to the College of Arts and Sciences, and after September, 1911, they must have nine units.

FEES

Tuition is free to West Virginia students. For students from other states the tuition is $10.00 per quarter, or $25.00 per year.

A matriculation fee of $5.00 is payable upon entering the preparatory school by all students except cadets.

The contingent fee is $2.00 per quarter and is payable by all students except cadets.

The athletic fee is $2.00 per quarter for the fall and spring quarters, and $1.00 for the winter quarter, payable at the beginning of each quarter by all students.

PRIZES

1. The Inter-Society Prizes

Prizes aggregating ninety dollars are awarded annually by the Regents of the University to the literary society whose representatives shall in a public contest excel in declamation, original oration, and debate.

2. The Regents' Prize in Declamation

The Regents of the University annually award to the student in the preparatory school who excels in declamation, a prize of thirty dollars, and to the one who ranks second, a prize of twenty dollars.

DEPARTMENTS OF INSTRUCTION

BOTANY

1. **Elementary Botany.** The courses in elementary botany are arranged for those who wish to obtain a practical knowledge of plants in general. An introductory study of the structure and physiology of seed plants is followed by the physiology, morphology, and life history of representative plants of common occurrence, selected from the algae, fungi, liverworts, mosses, ferns, and seed plants, with special reference to their economic importance. Lectures, recitations, and laboratory work. Fall, 10:30; N. F.

2. **Elementary Botany.** Continuation of course 1, which is a prerequisite. Winter, 10:30; N. F.

CHEMISTRY

1. **Inorganic Chemistry.** This course is designed for beginners and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties, and compounds of the non-metallic elements, and the principles and theories of chemical philosophy. Experimental lectures, laboratory work, and recitations.

Fall, first section, 9:30; second section, 11:30; 20 S.

2. **Inorganic Chemistry.** This course includes the study of the metallic elements, and special attention is paid to the application of chemistry to agriculture, engineering, medicine, and everyday life.

Winter, first section, 9:30; second section, 11:30; 20 S.

3. **Organic Chemistry.** This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work, and recitations.

Spring, first section, 9:30; second section, 11:30; 20 S.

On Mondays, at 1:30, during the Winter and Spring quarters, a special laboratory course is given to accompany courses 1, 2, and 3, which is prescribed for all students who are taking the courses named. Students who have completed these courses elsewhere and have received credit for the same may be admitted to this laboratory course and will receive credit for the work done.

ENGLISH

Mr. JOHNSON, Mr. SMITH, and Mr. GALLUP

1. **Grammar and Composition.** This, with the following course, involves a practical drill in orthography, punctuation, and the principles of grammar. Composition work is based upon the reading and study of selections from some American authors.

Fall, 9:30; Mr. GALLUP, 10 M.

2. **Grammar and Composition.** Continuation of course 1.

Winter, 9:30; Mr. GALLUP, 10 M.

Note:—Courses 1 and 2 are intended for those students whose training in elementary English is defective, and are not counted for entrance to the University.

3. **Elementary Rhetoric and Composition.** In this and the two following courses, careful drill in reproduction and original composition is continued. In each course one of the English or American classics is studied closely. Exercises in oral composition, in writing paraphrases and amplifications, in the meaning and use of words, and in construction of sentences and paragraphs, are based on the reading.

Spring, 9: 30; Mr. GALLUP. Fall, 8:30; Mr. JOHNSON, 10 M.

4. **Elementary Rhetoric and Composition.** Continuation of course 3.

Fall, 10:30; Mr. SMITH. Winter, 8:30; Mr. JOHNSON, 10 M,

5. **Elementary Rhetoric and Composition.** Continuation of course 4. Winter, 10:30; Spring, 8:30; Mr. SMITH, 13 W.

6. **Composition and Rhetoric.** In this, and the following course, careful drill in composition is continued, embracing a study of the sentence, the paragraph, the theme, diction, the figures of speech, and the important forms of prose and poetry. In each of these courses one of the English or American classics is studied closely in class, and book reviews and outlines are prepared of other required readings. Some attention is paid to the review of grammatical principles and to the history of the English language.

Spring, 10:30; Fall, 8:30; Mr. SMITH, 13 W.

7. **Composition and Rhetoric.** Continuation of course 6.

Fall, 10:30; Winter, 11:30; Mr. JOHNSON, 10 M.

Note:—Course 7 will also be offered in the Spring quarter when there is sufficient demand.

8. **English Literature.** A study of some of the English classics prescribed in the college entrance requirements. As far as practicable, this work in literature is made to illustrate and enforce the knowledge already gained from the study of rhetoric. Critiques and

reviews. Winter, 10:30; Spring, 11:30; Mr. JOHNSON, 10 M.

9. English Literature. Continuation of course 8.

Spring, 10:30; Fall, 11:30; Mr. JOHNSON, 10 M.

Note:—Students will not be admitted to courses 8 and 9 until they have credit for all the preceding courses.

FRENCH

1. Elementary Course. Grammar, reading, and composition. Stress is laid on the pronoun and the conjugation of the verb. Constant practice in pronunciation and oral understanding. Fraser and Squair's French Grammar; Aldrich and Foster's French Reader.

Fall, first section, 8:30; 11 W.; second section, 9:30; 2 M.

2. Elementary Course. A continuation of course 1. Grammar, reading, and composition, with continued practice in pronunciation and oral understanding. Fraser and Squair's French Grammar; Aldrich and Foster's French Reader.

Winter, first section, 8:30; 11 W.; second section, 9:30; 2 M.

3. Elementary Course. A continuation of course 2. Grammar, reading, composition, and oral understanding. Halévy's L' Abbé Constantin or Verne's Vingt Mille Lieues sous les Mers.

Spring, first section, 8:30; 11 W.; second section, 9:30; 2 M.

4. Fiction of the Nineteenth Century. Reading of Merimeé's Colombo, Balzac's Contes, and George Sand's La Petite Fadette. Composition once a week. Particular attention given to pronunciation and oral understanding. Fall, 10:30; 11 W.

5. Fiction of the Nineteenth Century. A continuation of course 4, with additional emphasis on syntax and idioms. Alphonse Daudet's Tartarin de Tarascon, Pierre Loti's Pêcheur d' Islande, and Anatole France's Le Crime de Sylvestre Bonnard. Composition as above. Winter, 10:30; 11 W.

6. France and the French People of To-day. Study of the country from a commercial and geographical standpoint; Parisian and provincial life; reading and discussion in French of magazine articles and questions of popular interest. Daily theme work and as much French conversation as practicable. Work largely based on Foncin's Le Pays de France. Spring, 10:30; 11 W.

SPANISH

The following courses have in view both the study of literature and the application of the language to commercial uses and conversation. The close relations of our country with those of Spanish America necessitate the study of Spanish as a living and not as a

dead language. Hence, while due attention is given to the rich literature of Spain, full opportunities are offered to acquire a practical knowledge of the language.

1. **Elementary Course.** Grammar and reading, with practice in pronunciation, composition, and oral understanding. Loiseaux' Elementary Spanish Grammar and Ramsey's Elementary Spanish Reader. Fall, 10:30; 11 W.

2. **Intermediate Spanish.** Grammar, oral exercises, easy conversation and select readings from contemporary authors. Loiseaux' Elementary Spanish Grammar and Fontaine's Flores de España. Winter, 10:30; 11 W.

3. **Modern Fiction.** Study of two or three works to be selected from the following: Perez-Galdós' Doña Perfecta and Marianela; Valdés' José and La Algeriá del Capitán Ribot; Valera's El Pájaro Verde; Alarcón's El Capitán Veneno and El Niño de la Bóla. Spring, 10:30; 11 W.

GERMANIC LANGUAGES AND LITERATURE

Professor TRUSCOTT and Mr. GRAVES

NOTE:—The text-books named in the following courses may be changed at any time, but the grade and character of the work outlined in each will remain the same.

1. **Elementary German.** The object of the course is to acquaint the student with the elements of the grammar, to give him a reading knowledge of the easiest German prose, and as much practice as possible in pronunciation. Vos', or Thomas' Grammar; Super's German Reader, Part I, or Tuckerman's German Reader.

Fall, first section, 9:30; Mr. GRAVES; second section, 10:30; Mr. GRAVES. Winter, 11:30; Professor TRUSCOTT, 18 W.

2. **Elementary German.** A continuance of course 1; reading of easy prose and poetry; several poems will be memorized. Elementary work in composition. Super's Reader; Lechner's Legends of German Heroes; Geibler's Deutsche Sagen; Bierworth's German Exercises.

Winter, first section, 9:30; Mr. GRAVES; second section, 10:30; Mr. GRAVES. Spring, 11:30; Professor TRUSCOTT, 18 W.

3. **Elementary German.** A continuation of course 2; reading, dictation, elementary work in composition, accompanied by a review of the main points of the grammar; Immensee; Hoeher als die Kirche; L'Arrabiata; Bierwirth's German Exercises.

Fall, 11:30; Professor TRUSCOTT; Spring, first section, 9:30; second section, 10:30; Mr. GRAVES, 19 W.

4. **German Prose.** Rapid reading of prose by modern authors to familiarize the student with the more general phases of the language. Fall, 8:30; Mr. GRAVES, 19 W.

5. **Composition.** Translation of English prose into German; discussion of grammatical points in connection with the translation; dictation; study of the irregular verbs. Pope's Prose Composition; Thomas' Grammar, Part II. Winter, 8:30; Mr. GRAVES, 19 W.

6. **German Poetry.** Translation of one long poem and one drama; reading of many and memorizing of several well-known poems. Hermann und Dorothea; Die Jungfrau von Orleans; Klenze's Deutsche Gedichte. Spring, 8:30; Mr. GRAVES, 19 W.

GREEK LANGUAGE AND LITERATURE

Miss BUCHANAN

1. **White's First Greek Book (Chapters I-XL).** This course is for beginners. The work covers pronunciation, accent, declensions and conjugations, etymology of words, and simple translations from Greek into English and from English into Greek to illustrate the principles of grammar as given in the text.
Fall, 9:30; 7 M.

2. **White's First Greek Book (Completed).** A continuation of course 1; much attention is paid to the vocabulary; daily exercises in sight reading. The first book of the Anabasis is read in connection with courses 1 and 2. Prerequisite, Greek 1.
Winter, 9:30; 7 M.

3. **Xenophon's Anabasis (Books II, III, and IV).** Prose composition; a fuller knowledge of the grammar. Prerequisites, Greek 1 and 2. Goodwin's Xenophon's Anabasis; Goodwin's Greek Grammar; Pearson's Greek Prose Composition. Spring, 9:30; 7 M.

4. **Select Readings.** Selections from the works of Xenophon and Herodotus; continued sight reading; review of Greek accidence and further study of syntax. Fall, 10:30; 30 L.

5. **Lysias' Orations.** Given alternately with Greek 7. A study of the form of Greek orations and Lysias' style; collateral library work assigned to each student; sight reading. Prerequisites, Greek 1, 2, 3, and 4, or their equivalent. Omitted in 1910-11.
Winter, 10:30; 30 L.

6. **Homer's Iliad or Odyssey (Books I, II, and III) and Homeric Verse.** All the text is read metrically. Etymology, mythology, and prosody are studied in connection with the text. Seymour's Iliad. Collateral reading: Jebb's Introduction to Homer; Gladstone's Time and Place of Homer. Prerequisites, Greek 1, 2, 3, 4, 5. Spring, 10:30; 30 L.

7. **Lucian's Shorter Dialogues.** Given alternately with Greek 5. The Dialogues of the Dead and other short dialogues are read. Selections from Lucian by Williams. Winter, 10:30; 30 L.

HISTORY AND CIVICS

Mr. GALLUP

The following courses are intended to present a general outline of the field of history and to furnish a suitable introduction to the college courses in history. The course in civics gives a part of the preparation required of students who desire admission to the college courses in political science. Preparatory students are advised not to take more than one course in history or civics in one term.

1. **History of Greece.** An outline study of Greek history, with special reference to the development and peculiar characteristics of Greek civilization. Fall, 11:30; 22 W.

2. **History of Rome.** An outline study of Roman history from the founding of Rome to 476 A.D. Winter, 11:30; 22 W.

3. **Mediaevel and Modern History.** A general survey of the history of western Continental Europe from the break-up of the Roman empire to the present time. Spring, 11:30; 22 W.

4. **History of England.** An outline of English history from the earliest times to the present. The founding, unfolding, and expansion of the English nationality, and the growth of English institutions. Fall, 11:30; Mr. GALLUP, 22 W.

5. **United States History.** A general course of narrative and political history required for admission to all college courses in United States history. Winter, 11:30; Mr. GALLUP, 22 W.

6. **Civics. West Virginia and the Nation.** This course presents an outline of (1) the government of West Virginia; (2) the structure of the Federal government and the methods of governing under it; and (3) the rights and duties of American citizens. Prerequisite, course 5. Spring, 11:30; Mr. GALLUP, 22 W.

LATIN

Professor HARE

1. **Etymology.** Chase and Stuart's First Year in Latin, pages 9 to 104. Fall, 11:30; Spring, 8:30; 11 M.

2. **Syntax.** Chase and Stuart's First Year in Latin, pages 104 to 180. Winter, 11:30; 11 M.

3. **Oratio Obliqua and Caesar (Book 1, Chapters 1 to 29).** Chase and Stuart's First Year in Latin, completed. Spring, 11:30; 11 M.

4. **Caesar's Gallic War (Books I and II).** Fall, 10:30; 11 M.

5. **Caesar's Gallic War (Books III and IV).** Winter, 10:30; 11 M.

6. **Cicero's Orations against Catiline I, II, and III.** Spring, 10:30; 11 M.

7. **Cicero's Fourth Oration against Catiline, the Oration for Archias, and the Aeneid of Virgil (Book I).** Fall, 9:30; 11 M.

8. **Virgil's Aeneid (Books II, III, and IV).** Winter, 9:30; 11 M.

9. **Virgil's Aeneid (Books IV, V, and VI).** Spring, 9:30; 11 M.

Latin Composition is required once a week in courses 7, 8, and 9.

Allen and Greenlough's Latin Grammar is used in courses 4 to 9. The courses must be taken in the order named.

MATHEMATICS

Miss BUCHANAN and Mr. FOULK

Algebra

1. **Algebra to Fractions.** Hedrick's Algebra for Secondary Schools to page 117. Fall, 10:30; Spring, 8:30; Winter, 10:30.

2. **Algebra to Quadratic Equations.** Hedrick's Algebra for Secondary Schools to page 203. Winter, 10:30; Spring, 10:30.

3. **Algebra to Progressions.** Hedrick's Algebra for Secondary Schools to page 322. Spring, 10:30; Fall, 11:30.

A second section of algebra 1, 2, and 3 is formed when the class is large.

4. **Algebra. Review Course.** Simple equations, discussions of problems, zero and infinity, inequalities, involution, theory of exponents, radicals, quadratic equations. Wentworth's College Algebra. Fall, 8:30; Winter, 11:30.

Geometry

5. **Plane Geometry.** Rectilinear Figures, and the Circle. Wentworth's Plane Geometry, Books I and II. Fall, 9:30; Winter, 8:30.

6. **Plane Geometry.** Wentworth's Plane Geometry, Books III and IV. Winter, 9:30; Spring 8:30.

PHYSICS

Mr. POST

1. **Elementary Physics.** Recitations, supplemented by experiments and laboratory exercises. One exercise per week at least is devoted to individual laboratory work. Rowland and Ames' Elements of Physics. Prerequisite, Plane Geometry 1. Fall, 8:30; 11 S.

2. **Elementary Physics.** Continuation of course 1. Winter, 8:30; 11 S.

PHYSICAL GEOGRAPHY

Mr. POST

1. **Physical Geography.** Man and nature, the atmosphere, the land and the ocean; the movements of these and their effect upon man; natural conditions conducive to the development of highest civilizations; distribution of animal life. Davis' Physical Geography. Spring, 10:30; 30 S.

PHYSICAL TRAINING

Director CHEZ and Mrs. CHEZ

By an order of the Board of Regents, physical training is required of all young men in the Preparatory School in the fall quarter of each year. A regulation suit is required. This suit consists of a black quarter-sleeve jersey, white track pants, long black stockings, and white gymnasium shoes.

PHYSIOLOGY

1. **Elementary Physiology.** For advanced preparatory students. Fall, 9:30; 2 W.

2. **Elementary Physiology.** Continuation of course 1. Fall, 10:30; 2 W.

ACCOUNTING

Mr. WILLIS and Mr. KING

NOTE. The following courses in accounting may be offered for entrance credit in the University only by students who register for one of the courses in commerce. See University Catalogue for 1910-11, page 62.

1. **Elementary Business Practice.** The elements of single and double entry accounts; the use of books of original entry; the use of ledgers and books of permanent record; the use of trial balances; and abstracts of single entry accounts; the methods of detecting and correcting errors in books of original entry ledgers, etc., the use and method of ruling, etc., the methods of closing single and double entry ledgers. Fall, Winter, Spring; 8:30; 12 M.

2. **Accounting Practice.** This is an introductory course consisting of business practice and extensive drills in the use of vouchers, files, and in journalizing, posting, etc. Elementary rules and fundamental principles of book-keeping. The student is familiarized with the duties of a bill clerk, shipping clerk, warehouseman, secretary and book-keeper for a firm doing a merchandising business. Prerequisite, Accounting 1. Fall, Winter. Spring, 8:30; 12 M.

3. **Accounting and Office Work.** Continuation of course 2. Making inventories of the property and resources and liabilities, financial statements, balances and balance sheets, etc.; writing of articles of agreement, deeds, mortgages, bills of sale, etc.; adjust-

ment of losses and the settlements with insurance companies after a fire; changing the firm and the kind of business, etc., and changing from double to single entry book-keeping. Prerequisites, Accounting 1 and 2. Fall, Winter, Spring, 8:30; 12 M.

STENOGRAPHY

Mr. KING

NOTE. The following courses in stenography and typewriting cannot be counted as entrance credits for admission to the University.

1. **Fundamental Principles—Amanuensis Style.** In this course theory and practice are combined in such a way as to enable the student to apply without hesitation the principles he has learned in the writing of isolated words, phrases, sentences and letters. Accuracy, rather than speed, is required. Pitman-Howard's Phonographic Amanuensis. Prerequisite, English 3. Fall, 10:30; 18 M.

2. **Contracting Principles—Amanuensis Style.** In this course accuracy is still emphasized but speed is given some consideration. At the close of this course the student should be prepared for general dictation and speed exercises. Pitman-Howard's Phonographic Amanuensis and Dictation Course. Winter, 9:30; 18 M.

3. **General Dictation and Speed Practice—Amanuensis Style.** General dictation of business, railroad, and technical letters, railroad orders and notices, specifications, and legal forms and documents, with sight reading of classics in shorthand, and a study of selected useful contractions. Pitman-Howard's Dictation Course and Dictionary and Phrase-book.
Winter, 11:30, Spring, 9:30; 18 M.

4. **General Dictation and Speed Practice—Amanuensis Style.** Continuation of course 3. Pitman-Howard's Dictation Course, Dictionary and Phrase-book, etc. Spring, 10:30; 18 M.

5. **Reporting Style.** This course is designed for those who have completed courses 1 and 2 and who desire to prepare themselves for taking testimony and depositions, or for reporting speeches and other discourses. It prepares the student for the actual work found in course 6. Pitman-Howard's Reporter's Companion, and Dictionary and Phrase-book. Fall, 8:30; 18 M.

6. **Court Reporting—Reporting Style.** This is a special course in court reporting for students who have completed courses 1, 2, and 5. This work is given in connection with the classes in court practice in the College of Law. The student is appointed court stenographer by the judges of the court and reports the cases tried

in that court and in the justices' court of the same department. Duplicate reports are submitted for inspection. This gives the student actual practice in court reporting, as required by the West Virginia law. In addition to this actual practice daily drills are given to acquire speed in writing and transcribing testimony. Pitman-Howard's Reporter's Companion, and Dictionary and Phrase-book.

Winter, 2:00 to 4:00 P. M.

TYPEWRITING.

Mr. KING

NOTE:—Both single and double, universal keyboards, with blank key-tops are employed for instruction and practice in touch typewriting, the modern method of instruction. The quality of the work performed by the student is inspected by the instructor at regular intervals.

1. **Mechanism of the Machine and Mastery of the Keyboard.** The instruction includes a study of the mechanism and method of operating the machine, with due regard to its cleanliness; position at machine; fingering and touch; through drills on the various exercises outlined in the text. The exercises are graduated in such a way that perfect work is required from the beginning. Ross's Progressive Lessons in Touch Typewriting. One-third course.

Fall, Winter, Spring, 8:30 to 12:30; 19 M.

2. **Practice.** The transcription of exercises, letters, and other suitable matter, either from shorthand notes or English text. The student is taught to rely upon himself and to work for the highest possible speed consistent with perfect work. One-third course.

Fall, 8:30; Winter, 10:30; Spring, 11:30; 19 M.

3. **Forms and Practice.** Transcription of various forms of letters, legal forms and documents, specifications, court proceedings, etc.; folding and backing of manuscripts. One-third course.

Fall, 10:30; Winter, 8:30; Spring, 10:30; 19 M.

4. **Manipulation of Manifold Devices, Etc.** The student is instructed in the use of carbon paper, the hectograph, the rotary mimeograph, the multograph, and other duplicators, and is given actual work to preform on these devices. He is also instructed in the most modern methods of filing correspondence, and the proper use of other office accessories and equipment. One-third course.

Fall, 11:30; Winter, 11:30; Spring, 8:30; 19 M.

THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION

STAFF

JAMES H. STEWART, A.M., *Director and Agriculturist*

BERT HOLMES HITE, M.S., *Vice Director and Chemist*

WILLIAM EARL RUMSEY, B.S.Agr., *Entomologist*

WELTON MARKS MUNSON, Ph.D., *Horticulturist*

NAHUM JAMES GIDDINGS, M.S., *Bacteriologist*

FREDERICK E. BROOKS, *Associate Entomologist*

HORACE ATWOOD, M.S.Agr., *Assistant Agriculturist*

FRANK BATSON KUNST, A. B., *Assistant Chemist*

CHARLES EDWARD WEAKLEY, Jr., *Assistant Chemist*

JAN HENDRICK BERGHUIS-KRAK, *Assistant Chemist*

ARTHUR LINCOLN DACY, B.Sc., *Assistant Horticulturist*

OSCAR CHARLES BECK, B.S., *Assistant Chemist*

WILLIAM J. WHITE, *Clerk*

MARTHA A. STEWART, *Librarian*

ALICE ENGLE, *Secretary*

The Experiment Station is a distinct and separate department of the University, and was established by the Board of Regents in 1887, by authority of an act of Congress, known as the Hatch Act, which was passed on the 2nd day of March of that year. The funds for carrying on the operation of the station, with the exception of its earnings, are derived wholly from the general government. The aforesaid act in section 2 fully states the object and purposes of the Experiment Station as follows:

"That it shall be the object and duty of said experiment station to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches and experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states and territories."

Bulletins and annual reports setting forth results of experiments and investigations conducted at the station are published for gratuitous distribution, and will be mailed to any citizen of the state applying for them. The station invites correspondence, suggestions, and advice from farmers and others interested in this work, and all such, with reference to bulletins, experiments, or any matter relating to agriculture, will be welcomed and will receive careful and prompt attention. Correspondence should be addressed to the director of the station.

DIPLOMAS AND CERTIFICATES

COMMENCEMENT, JUNE 16, 1909

Artist's Diploma. Voice.

Lois Florence Simmons	Morgantown

Artist's Diploma. Piano

Elizabeth Josephine Cooke	Morgantown
Alberta Ruth Egbert	Morgantown
Grace Jolliffe	Anthem
Ella Gertrude Mattingly	Morgantown
Lena Esther Palmer	Morgantown

Teacher's Certificate. Piano

Cecyle Mayme Furman	Cassville
Ocie Sadie Hardesty	Mannington
Lulu Eugenia Layton	Morgantown
Helen Louise Stone	Morgantown

Commercial Diploma

James Franklin Hare	Morgantown
Ethelyn Elizabeth Wolfe	Morgantown
Evelyn Maude Wolfe	Morgantown

PRIZES AND HONORS

Inter-Society Prizes

For the Demosthenian Society:

Debate—

FRED BLAINE DEEM ..... Parkersburg

RUFUS M. MUSICK ..... Williamson

For the Athenian Society:

Oration—

JESSE J. JENKINS ..... Uffington

Declamation—

JOHN ALEXANDER MACRAE ..... Mannington

Regents' Prize in Declamation

JOHN ALEXANDER MACRAE ..... Mannington

ROBERT WILSON EVANS ..... New Cumberland

LIST OF STUDENTS

STUDENTS REGULARLY ENROLLED IN THE SCHOOLS

In the following list are included: (a) the names of all students regularly enrolled in the various schools of the University, (b) the names of those registered in the School of Sunday School Methods conducted in connection with the Summer School. In the case of students in the Preparatory School the year or class in which they were enrolled on the first day of January, 1910, is indicated in the third column.

Abbott, Amanda	Grafton	S. S. Methods
Adams, Delila	Sutton	Summer School
Adams, Hannah	Sutton	Summer School
Adams, John Ross	Morgantown	3rd Year Prep.
Adams, Charles Sisson	Morgantown	2nd Year Prep.
Alexander, Harriette Faris	Wheeling	2nd Year Prep.
Allen, Edward Alburtis	Shinnston	S. S. (Special, A. & S.)
Allen, Helen Nancy	Flemington	Summer School
Amos, Frank Regin	Fairmont	4th Year Prep.
Anderson, Isabella	Parkersburg	Summer School
Andrews, William Randall	Mannington	S. S. Methods
Andrews, Caroline	Mannington	Summer School
Appleton, Martha	Parkersburg	Summer School
Arnold, Arthur Thomas	Moundsville	S. S. Methods
Artis, Besse	Connellsville	Summer School
Ash, Ray	West Union	1st Year Prep.
Ashburn, Tensie	West Union	Summer School
Anvil, Della	St. Marys	Summer School
Ayers, Ella Buena	Lost Creek	Summer School
Babbitt, Chilton Lee	Cowen	S. S. Methods
Backus, Rufus Grant	Salem	S. S. Methods
Bailey, Guy Vandervort	Morgantown	Commercial
Baker, George Emerson	Layton, Pa.	2nd Year Prep.
Baker, Emmett Conner	Sinks Grove	4th Year Prep.
Baker, Grace Juliette	Morgantown	2nd Year Prep.
Ballard, Findley Humphreys	Ballard	2nd Year Prep.
Barker, Della Lesselle	Morgantown	Commercial
Barnett, Georgia	Parkersburg	Summer School
Bartlett, Mattie	Clarksburg	Summer School
Bassell, Lucy Belle	Clarksburg	Summer School
Beaumont, Catherine Elizabeth	Morgantown	3rd Year Prep.
Beaumont, John Herbert	Morgantown	2nd Year Prep.

Beckett, Ernest Clyde	Morgantown	Music
Beer, Blanche	Belington	Summer School
Behrens, Augusta Carolena	Sherrard	Summer School
Bender, Anna Marie	Gassaway	Summer School
Bender, Nettie	Grafton	Summer School
Betz, Mary Maud	Martinsburg	Summer School
Bills, Mary	St. Marys	Summer School
Bird, Grace	Martinsburg	Summer School
Black, Edward Virtue	Elizabeth	S. S. Methods
Black, Louis Eckart	Clarksburg	S. S. Methods
Blair, Charlotte Amy	Waynesburg, Pa.	Music
Blenko, Grace Agnes	Pt. Marion, Pa.	Music
Bonar, Eustace Erwin	Moundsville	Summer School
Bonar, John Stanley	Benwood	Summer School
Bond, Luther Adolphus	Lost Creek	S. S. Methods
Bond, Aura Lea	Roanoke	Summer School
Boone, Frank Luster	Alderson	4th Year Prep.
Baughman, Jeanette Marie	Parkersburg	Summer School
Bour, John William	Morgantown	2nd Year Prep.
Bowers, Charles Albert	Wheeling	S. S. (Grad., A. & S.)
Bowlby, Emmons	Bowlby	Cer. Agr.
Bradley, Edna	Littleton	Summer School
Brake, Linnie Louise	Auburn	Summer School
Brake, Laura Alice	Auburn	Summer School
Brand, Linnie	Morgantown	2nd Year Prep.
Breakiron, Ross Earl	Morgantown	1st Year Prep.
Brinkley, Rose	Salem	Summer School
Brissey, George Amos	West Union	Summer School
Broadwater, Charles Lester	Harrisville	Summer School
Brock, Eleanor	Morgantown	2nd Year Prep.
Brooke, Marshall Dodd	Uniontown, Pa.	2nd Year Prep.
Brooks, Morgan McClancy	Grafton	Summer School
Brooks, Earle Amos	Weston	S. S. Methods
Brown, Effie Grace	Bridgeport	Summer School
Brown, Howard Condit	Clay	3rd Year Prep.
Brown, Mollie Melcena	Beaver	Summer School
Brown, Myrtle	McMechen	Summer School
Brown, Thomas Granville	Uffington	2nd Year Prep.
Brown, Zela Elizabeth	Beaver	Summer School
Bryner, May Foster	Chicago, Ill.	S. S. Methods
Buchanan, Margaret	Morgantown	Dom. Sc.
Buckey, William Emmett	Beverly	Summer School
Bumgardner, Ettie	Salem	Summer School
Burdett, Fred Herbert	Morgantown	Commercial
Burk, Anna May	Dunkard, Pa.	Music
Burns, LaVega Washington	Marlinton	S. S. (Sen., A.B.)
Burrell, Lewis Glenn	Weston	4th Year Prep.
Burton, Rachel Lavinia	Welcome	Summer School
Callaway, Richard Rockland	Marshes	2nd Year Prep.
Campbell, Ella	McMechen	Summer School
Campbell, Carrie Curtis	McMechen	Summer School
Campbell, Minnie	Burnsville	Summer School
Caperton, William Gaston	Charleston	S. S. (Bar Law)
Carpenter, Maude Kramer	Middlebourne	Summer School
Carns, Alfred	Morgantown	2nd Year Prep.

Chalmers, Mary Adam	Morgantown	Commercial
Chamberlin, Harrie Rogers	Morgantown	S. S. (Grad., A. & S.)
Chambers, Ella	Moundsville	S. S. Methods
Charter, Lena Mabel	Ravenswood	S. S. (Soph. A.B.)
Christie, Mary Virginia	Fairmont	Music
Clark, Jeanette	Morgantown	Dom. Sc.
Clarke, Joseph	Columbus, O.	S. S. Methods
Clevenger, Dolores Winifred	West Union	Summer School
*Cobb, Minnie	Mercers Bottom	S. S. (Fr., A.B.)
Cobun, Adah Prudence	Terra Alta	Summer School
Coburn, Camden McCormick	Meadville	S. S. Methods
Coffman, Harry Franklin	Cumberland, Md.	3rd Year Prep.
Cokeley, Roscoe Benjamin	Harrisville	Summer School
Colcord, Eugene Lyon	St. Albans	3rd Year Prep.
Cole, James Henderson	Morgantown	4th Year Prep.
Cole, Priscilla	Morgantown	Commercial
Coleman, Jennie Lenora	Wheeling	S. S. Methods
Comley, Cora Olga	Morgantown	Commercial
*Compton, Ada Blanche	Keyser	S. S. (Fr., A.B.)
Congleton, Elizabeth	Parkersburg	Summer School
Conner, Joseph Alger	Pleasant Valley	2nd Year Prep.
Conner, Lena	Wheeling	Summer School
Conrad, Clara Wooddell	Webster Springs	Summer School
Cook, Alice Virginia	Cameron	3rd Year Prep.
Cook, Mary Elizabeth	Cameron	S. S. Methods
Cooke, Elizabeth Josephine	Morgantown	4th Year Prep.
Coombs, Edith Ellwood	Morgantown	Music
Coombs, Forest Pembrook	Morgantown	3rd Year Prep.
Core, Addison Lee	Cassville	2nd Year Prep.
Core, Minnie Leigh	Morgantown	S. S. Methods
Core, Rebecca	Cassville	Commercial
Criss, Etta	Sutton	Summer School
Cummins, Carroll Elbridge	Washington	S. S. (Sen., A.B.)
Cunningham, Mabel	Elkins	Summer School
Cunningham, Nelle Rebecca	Pt., Marion, Pa.	Commercial
Dadisman, Andrew Jackson	Grafton	S. S. (Fr., A.B.)
Dangerfield, Nannie	Princeton	Summer School
Darby, Helen	Uniontown	Summer School
*Darling, Anna Belle	Morgantown	S. S. (Fr., A.B.)
Davis, Nora Lou	Wheeling	Summer School
Davis, Charles Lee	Smithton	2nd Year Prep.
Davis, Florence	Benwood	Summer School
Davis, Leland Wilber	Morgantown	3rd Year Prep.
Davis, Maleta Hassetine	Jane Lew	S. S. Methods
Davis, Marguerite Jane	Morgantown	Music
Davis, Susie Grace	Lost Creek	S. S. Methods
Davisson, Zula	Bristol	Summer School
Dawson, Pansy Byrd	Clarksburg	Music
DeBolt, Philip Yeager	Sistersville	S. S. (Soph., A.B.)
Deem, Fred Blaine	Parkersburg	3rd Year Prep.
DeHaven, Ashby Sylvester	Martinsburg	2nd Year Prep.
Deitz, Charles Henderson	Blue Sulphur Springs	1st Year Prep.
Deusenberry, Iona Blanche	Morgantown	Com. and Phys. Train.

Deusenberry, Mary Jettie	Morgantown	Commercial
Deusenberry, Ruby Dale	Morgantown	Art.
Dixon, William Losy	Alderson	3rd Year Prep.
Dodrill, R. Moore	Webster Springs	Summer School
Donley, Angileen Morris	Mt. Morris, Pa.	Music
Drennen, Lida Fulman	Mecca	Summer School
Drennen, Mary Effie	Spencer	Summer School
Duling, Orton Everett	Morgantown	2nd Year Prep.
Duling, Irl Noel	Morgantown	2nd Year Prep.
Duncan, Carl Ray	Uffington	2nd Year Prep.
Dunkle, John Lee	Deer Run	S. S. (Soph., M.E.)
Eakle, John Eldredge, Jr.	Tesla	Summer School
Edie, Mary Carson	Morgantown	Summer School
Edwards, Alta Muse	Benwood	Summer School
Egbert, Alberta Ruth	Morgantown	Music
Ellis, Alfonza Lee	Mountainburg, Ark.	1st Year Prep.
Engle, Alice	West Union	2nd Year Prep. & Dom. Sc.
Enright, Hattie Chrystel	Parkersburg	Summer School
Evans, George Morgan	Morgantown	S. S. (Grad., A. & S.)
Evans, Robert Wilson	New Cumberland	2nd Year Prep.
Fast, Herman Otha	Herold	Summer School
Faust, Carter Leonidas	Fairmont	Summer School
Fields, William Henry	Wheeling	S. S. Methods
Fike, Arthur	Terra Alta	4th Year Prep.
Finlayson, John Kennedy	Sistersville	S. S. (Sen., A.B.)
Fitch, Jessie Johnson	Morgantown	Music
Fitch, Katherine Finnell	Morgantown	Art
Fitzgerald, Sallie	Oak Hill	Summer School
Flinn, Elmer Henderson	Ravenswood	Summer School
Foley, Irene Staunton	Grafton	Summer School
Forman, Hattie Estelle	Grafton	Summer School
Forman, Maucealeene	Morgantown	Music
Forquer, Callie	Brandonville	Music
Fortney, Hugh Goff	Lumberport	3rd Year Prep.
Fowler, Nelle Hyacinthe	Harrisville	Summer School
Fry, Ruth	Morgantown	3rd Year Prep.
Frye, Arthur Leslie	Cameron	4th Year Prep.
Fye, Bessie May	Moundsville	S. S. Methods
Funderbuck, Joseph Van Metre	Martinsburg.	2nd Year Prep.
Gallanos, Ullyses Dimos	Morgantown	1st Year Prep.
Gallup, William Henry	Morgantown	S. S. (Grad., A. & S.)
Gandy, Frank Warren	Terra Alta	Summer School
Garber, Frankie Folsom	Elkins	Summer School
Gardiner, Mabel Henshaw	Martinsburg	S. S. (Jun. A.B.)
Garlow, Sara Ruth	Morgantown	Commercial
Gaskill, Rose Elizabeth	Fairmont	Music
Gaskill, Virginia	Fairmont	Summer School
Gatts, Daisy Marie	Moundsville	Summer School
Gebhard, Elizabeth Mary	Rochester, Pa.	Music
Gibson, Lloyd Camden	West Alexander, Pa	4th Year Prep.
Gilbert, Robert Warren	Norfolk, Va.	2nd Year Prep.
Ginkel, Iva Elenora	Morgantown	Music
Gist, Marie Anna	Wellsburg	4th Year Prep.
Glasgow, Alma Orella	Moundsville	Summer School

Glover, Jessie Romaine	Morgantown	Commercial
Glover, John Franklin	Morgantown	2nd Year Prep.
Goff, William Rush	Spencer	Summer School
Golden, Mabel	Dunbar, Pa.	Summer School
Gorby, John Henry	New Martinsville	Summer School
Gorman, Karl Hartmann	Morgantown	3rd Year Prep.
Gosney, Vance Legrande	Loudenville	Summer School
Gould, Lydia	Farmington	Summer School
Graham, Martha Virginia	Wheeling	S. S. Methods
Gregg, Lucile Chase	Morgantown	Music
Griffin, Harry Lewis	Morgantown	S. S. (Sen., A.B.)
Griffin, Ora Ethel	Independence	Summer School
Groleau, Naoma Georgina	Pt. Marion, Pa.	Summer School
Grose, Sylvester Carson	Sago	S. S. (Soph. A.,B.)
Groves, Artie Russell	Cuzzart	2nd Year Prep.
Guseman, Gladys Anna	Morgantown	4th Year Prep.
Gwynn, Jessie Ellis	Little Falls	S. S. Methods
Hagan, Fiatto Matildo	Hero, Pa.	Music
Hagerty, Newton	Sardis	Commercial
Hale, John Tierney	Weston	2nd Year Prep.
Hall, Percy	Tate	S. S. (Bar Law)
Hall, Emma Caroline	Parkersburg	Summer School
Hall, Florence Malinda	Grafton	Summer School
Hall, Margaret	New Martinsville	Summer School
Hall, Viola Myrtle	Morgantown	Com.
Hamilton, Agnes	Highland	Summer School
Hamilton, Bernard Alexander	Fayetteville	2nd Year Prep.
Hamrick, Mary Martha	Webster Springs	Summer School
Hanford, James Lawrence	Morgantown	Com.
Hannah, Electa Alice	Wilsonburg	Summer School
Hannah, Vesta Clio	Wilsonburg	Summer School
Hansbarger, Thomas Frederick	Peterstown	2nd Year Prep.
Harbert, Guy Morlan	Shinnston	Special
Harden, Hattie	Bristol	Summer School
Hare, Hazel Helen	Morgantown	Summer School
Harris, Emma Mae	Glen Easton	Music
Harris, Selma	Ravenswood	Summer School
Hartman, Cragan	Clarksburg	Summer School
Haught, Benjamin Franklin	Atwood	S. S. (Sen., A.B.)
Haught, Jackson Corrothers	Wadestown	1st Year Prep.
Haught, Leslie H.	Morgantown	Music
Hawkins, Opie Maud	Pullman	Music
Hedges, Grover Foster	Spencer	4th Year Prep.
Hedrick, Anna Bell	Alderson	S. S. and Com.
Henry, Guy Alexander	Morgantown	2nd Year Prep.
Hepburn, Viola	Hambleton	S. S. (Fr., A.B.)
*Hepburn, Margaret May	Lonaconing, Ind.	S. S. (Fr., A.B.)
Herring, Elizabeth Jane	Kingwood	Summer School
Hess, Arcanus Jefferson	Mannington	S. S. Methods
Hickman, James Howard	Auburn	Summer School
Hickman, Patrick	Berea	Summer School
Hines, Bertie	Little Birch	Summer School
Hively, George Lorraine	Walton	Summer School
Hixenbaugh, Aeria Edna	Hundred	Music
Hodges, Eliza Pearl	Morgantown	Music

Hodges, Grace Mabelle	Morgantown	Music
Hodges, Harold Grey	Morgantown	4th Year Prep.
Hoffman, Estiel Maude	Grafton	Summer School
Hoge, Elizabeth Stewart	Waynesburg	2nd Year Prep.
Hogg, Mary Pauline	Morgantown	Music
Hogg, Lulu Shannon	Wellsburg	Summer School
Hogg, Robert Lynn	Morgantown	Commercial
Hoggsett, Cora Alice	Fair Plain	Commercial
Hood, Lucie Leah	Wheeling	Summer School
Hopwood, Mary Katherine	Morgantown	Music
Hormell, Duane Cuzens	Morgantown	2nd Year Prep.
Houston, Georgie Carroll	Morgantown	Music
Hoylman, Joseph Newton	Organ Cave	Summer School
Hubbs, Jessie May	Moundsville	Summer School
Hubbs, George Emanuel	Cameron	Summer School
Huey, Glen Hamilton	Mannington	4th Year Prep.
Huggins, Laura	Wheeling	Summer School
Hughes, Audrey	Jane Lew	Summer School
Hughes, Fannie	Jane Lew	Summer School
Hughes, Texie Eva	Elkins	Commercial
Hunter, Helen Elizabeth	Morgantown	Music
Hursey, Mattie	Parkersburg	Summer School
Hurxthal, Christine	Morgantown	2nd Year Prep.
Husted, William Alfred	Fairmont	Summer School
Hutson, Stella Delle	Clarksburg	S. S. (Fr., A.B.)
Ice, Martha Byrd	Farmington	Summer School
Irwin, Maude Ernestine	Morgantown	Commercial
Iner, Carl Arthur	St. Marys	S. S. Methods
Jackson, Oscar Faulkner	Glenville	S. S. Methods
Jaco, Florence	Grafton	Summer School
Jamison, Roy Jarrett	Morgantown	Commercial
Jarvis, Audrey Brooke	Bridgeport	Summer School
Jenkins, Jesse J.	Uffington	4th Year Prep.
Jenness, Charles Kelley	Morgantown	S. S. Methods
John, Lemuel Nimrod, Jr.	Van Voorhis	Commercial
Johnson, Anna Hayes	Morgantown	Music
Johnson, Effie May	Williamstown	Summer School
Johnson, Eliza Evans	Kearneysville	Summer School
Johnson, Laura Dale	Morgantown	Summer School
Johnson, Sue Montgomery	Keyser	Summer School
Johnson, Charity Nelson	Bridgeport	Summer School
Jones, Goldie Leona	Morgantown	Music
Joseph, Nell Ethyl	Morgantown	Music
Kaufman, Edward Leo	McMechen	2nd Year Prep.
Keck, Mary Morrison	Morgantown	2nd Year Prep.
Keck, Leonidas Virginius, Jr.	Morgantown	1st Year Prep.
Keighron, Daniel Clement	Morgantown	Commercial
Kelley, Edna Marguerite	Morgantown	Art
Kelley, Mary	Davistown	Summer School
Kemp, Walter William	Captina	Summer School
Kemper, Esta Trumen	Freemansburg	2nd Year Prep.
Kenamond, Alva Dayne	Wheeling	S. S. (Grad. A. and S.)
Kenna, Joseph Norris	Charleston	Summer School
Kennedy, Maggie Florence	Rivesville	Summer School

King, Anna Bessie	Morgantown	Commercial
King, John Tolbert	McMechen	Summer School
Kinnaird, Lillie May	Williamstown	Summer School
Kirsch, Genevieve Anthis	Parkersburg	Summer School
Kitzmiller, Mary Ella	Clarksburg	Summer School
Kline, Boyd Harrison	St. Albans	2nd Year Prep.
Knapp, Mary Gray	Morgantown	4th Year Prep.
Knight, Dena Clare	Fairmont	Summer School
Knutti, John Gottlieb	Shepherdstown	S. S. (Grad. A. and S.)
Kolz, Mary Stella	Sherrard	Summer School
Krees, Charles Leslie	Parkersburg	Summer School
Kyle, Edwin Lewis	Welch	4th Year Prep.
Lamb, Ida May	Troy	S. S. (Fr. A. B.)
Lambert, Fred Bussey	Barboursville	Summer School
LaRue, Mary Gertrude	Morgantown	Music
Lawson, Elizabeth Bridgford	Elkins	Summer School
Layton, Lulu Eugenia	Morgantown	Music
Lee, Mabel	West Milford	Summer School
Lepley, Eleanor	Meyersdale, Pa.	Summer School
Lewellen, Lawrence Seaman	Spencer	Commercial
Lewis, Anna	Mason	S. S. (Fr. A. B.)
Lewis, Eunice	Buckhannon	Summer School
Lewis, Jennie Ann	Wellsburg	Summer School
Leyman, Edna May	Morgantown	Music
Lindsay, Grace Elizabeth	Martinsburg	Summer School
Long, Anna Van Voorhis	Mt. Morris, Pa.	Music
Long, Pearl	Parsons	Summer School
Long, Toi Gertrude	Pine Grove	S. S. Methods
Long, William Mahoffey	Clarksburg	S. S. Methods
Long, Nelle	Parsons	Summer School
Lord, Clara Belle	Martinsburg	Summer School
Lorentz, Fannie	Sutton	Summer School
MacRae, John Alexander	Morgantown	4th Year Prep.
Madigan, Jessie Bridget	Morgantown	Music
Malone, Lawrence	Montana Mines	4th Year Prep.
Marchand, Garnette	Morgantown	Commercial
Marr, Howard Burl	Mannington	4th Year Prep.
Marsh, Jessie	Sherrard	Summer School
Martin, Leona Mabel	Morgantown	S. S. (Fr. A. B.)
Martin, Marie Buxton	Morgantown	Music
Martin, Leroy Jehu	Grafton	Summer School
Mascioli, Sullivan	Morgantown	Commercial
Mason, Ivy Estella	Connellsville, Pa.	Summer School
McBee, Perry Caleb	Morgantown	S. S. (Grad. A. and S.)
McBee, Claude	Independence	Summer School
McCamic, Louis Harrison	Wellsburg	2nd Year Prep.
McClung, Magee	Leivasy	S. S. (Bar Law)
McClung, Harriett Wyatt	Huntington	Summer School
McClung, Rachel Burman	Leivasy	Summer School
McConkey, Orie	Clarksburg	S. S. (Grad. A. and S.)
McCurdy, Linnie Lucile	Parkersburg	Summer School
McDiffett, Anna Elizabeth	Connellsville, Pa.	Summer School
McDowell, Harry Wilford	Glen Easton	Summer School
McElhaney, Alice Katherine	Connellsville, Pa.	Summer School
McGill, John Morrow	Dawson, Pa.	4th Year Prep.

McKinney, Mary Louise	Fairmont	4th Year Prep.
McKisson, Elsie Alice	Sistersville	S. S. (Fr. A. B.)
McQuilkin, Dwight Eggleston	Shepherdstown	S. S. (Grad. A. and S.)
McVicker, John Morgan	Volga	Summer School
Menefee, Mae Golda	Terra Alta	Summer School
Mestrezat, Mary Helen	Morgantown	Music
Milam, William Harrison	Fry	2nd Year Prep.
Miles, Flora	Buckhannon	Summer School
Miller, Edith Roberts	Wheeling	S. S. Methods
Miller, Joseph Shields	Fairview	2nd Year Prep.
Miller, Moses Otto	Independence	3rd Year Prep.
Mitchell, John Bartow	Scenery Hill, Pa.	3rd Year Prep.
Moffatt, Benjamin Harrison	Shinnston	3rd Year Prep.
Montgomery, Flora Edith	Wheeling	Music
Moore, Almira Ann	Parkersburg	S. S. Methods
Moore, George Richard	Joseph's Mills	Summer School
Moore, Fred Van Voorhis	Van Voorhis	1st Year Prep.
Moore, Tocie	Mannington	Summer School
Moore, Lanty Jackson	Edray	Summer School
Morgan, Artha	Buckhannon	Summer School
Morgan, Frank Madera	Morgantown	Commercial
Morgan, Cleo	Grafton	Summer School
Morgan, Mollie	Buckhannon	Summer School
Morgan, Nellie Erma Blanche	Morgantown	2nd Year Prep.
Morgan, Ona	Ronceverte	Summer School
Morris, Nellie Delia	Morgantown	S. S. (Grad. A. and S.)
Morrison, Arphad Paul	Salem	Summer School
Morrow, Elizabeth Ellen	Woodsfield, O.	S. S. (Grad. A. and S.)
Muldoon, Ralph Wickliffe	Morgantown	3rd Year Prep.
Munk, Rudolph	Connellsville, Pa.	4th Year Prep.
Musser, Cronor Guy	Clarksburg	Summer School
Myers, Nettie	Parkersburg	Summer School
Neal, Ada May	Parkersburg	S. S. (Grad. A. and S.)
Nestor, Ida Flora	Hovatter	Summer School
Nestor, Silas James	Hovatter	Summer School
Newberry, Bertha Alma	Mill Creek	Summer School
Newbrough, Carl Dale	Morgantown	Commercial
Newman, Dora Lee	Glendale	Summer School
Newton, Douglas Everett, Jr.	Hartford	3rd Year Prep.
Nicholls, Adele Emelia	Morgantown	Music
Nolan, Myrta Philips	Morgantown	Summer School
Norman, Elsie Mae	Spencer	Commercial
Oates, Daisy	Parkersburg	Summer School
Ocheltree, Charles Hanson	Malden	S. S. Methods
Offutt, Effie Elizabeth	Burnsville	Summer School
Ogden, Dana Presley	Fairmont	2nd Year Prep.
Ogden, Lloyd Wayman	Clarksburg	Summer School
Orr, Mary	Triadelphia	S. S. (Fr. A. B.)
Orr, Lucy Mae	Masontown	Summer School
Ownby, Alex Wiley	Charleston	Summer School
Palmer, Lena Esther	Morgantown	Music
Parker, Errie Rivers	Fairmont	Summer School
Parker, George	Morgantown	Music
Patterson, Necie Leota	Kirby	Music
Patterson, James Howard	Sutton	Summer School

Paugh, Stella	Mount Clare	Summer School
Pearcy, Grace	Morgantown	Music
Pearcy, Grady	Morgantown	Commercial
Pearcy, Una Virginia	Morgantown	Music
Peck, Elizabeth Tapp	Morgantown	S. S. (Grad. A. and S
Peck, Rose Eliza	Morgantown	S. S. Methods
Pedicord, Aletha Bell	Benwood	Summer School
Pedicord, Harry Lewis	Benwood	Summer School
Peters, James Thomas	Lothan	Summer School
Peyton, Thomas West, Jr.	Barboursville	3rd Year Prep.
Phares, Lucy Olive	Elkins	S. S. Methods
Phillips, Charles	Franklin, Ind.	S. S. Methods
Pixler, Bertha Lee	Morgantown	Commercial
Poling, Forrest Blanchard	Philippi	S. S. Methods
Poling, Aldine Silliman	Philippi	S. S. Methods
Porter, Harvey Denney	Wana	1st Year Prep.
Potter, Nellie Blanche	Morgantown	3rd Year Prep.
Powell, Jonathan	Federal	1st Year Prep.
Price, William Logan	Morgantown	2nd Year Prep.
Prickett, Ada Belle	Ripley	Summer School
Prickett, Daisy	Ripley	Summer School
Protzman, Dessie	Morgantown	Music
Pugh, Eliza Jane	Morgantown	S. S. (Sen. A. B.)
Purinton, Florence Lyon	Morgantown	Dom. Sc.
Purinton, Daniel Boardman	Morgantown	S. S. Methods
Quinn, Elizabeth Scott	Mingo Junction, O.	Music
Radabaugh, David Adam	Hall	2nd Year Prep.
Raiguel, Harrison Gay	Alma	2nd Year Prep.
Randall, Helen Bell	Shinnston	Music
Redic, Lillie Belle	Fairmont	Summer School
Reed, John Albert	California, Pa.	Bar Law
Reed, Cora Elizabeth	West Alexander, Pa.	S. S. (Fr. A. B.)
Reed, Edward Ray	Clay	1st Year Prep.
Reid, Roswell Schell	Star City	Summer School
Reiner, Ada Eleanor Means	Morgantown	S. S. (Soph. A.B.) and Art
Reppert, Fred Gilson	Uffington	2nd Year Prep.
Reynolds, Harlan Haynes	Princeton	4th Year Prep.
Rice, Granville James	Big Bend	1st Year Prep.
Richards, Viola	Clarksburg	Summer School
Riddell, Nellie Blye	Wheeling	Summer School
Riggan, William Charles	Morgantown	2nd Year Prep.
Riheldaffer, William Aschman	Charleston	2nd Year Prep.
Ring, Royal Hugh	Richwood	2nd Year Prep.
Ringer, Bettie May	Morgantown	2nd Year Prep.
Ringer, Oliver Dee	Morgantown	4th Year Prep.
Ritter, John	Westfield, Pa.	4th Year Prep.
Robinson, J. French	Elizabeth	3rd Year Prep.
Robinson, Joseph Bayamin	Mt .Clare	Summer School
Robinson, Libbie Jean	Cheat Haven, Pa.	Summer School
Rogers, Nellie	Ravenswood	Summer School
Rogers, Ruby Augusta	Morgantown	Commercial
Rogers, William Harold	Brown	Summer School
Rohr, Cora Olive	Fairmont	Summer School
Romine, Mary Henrietta	West Milford	Summer School

Romisch, Katie	Morgantown	Commercial
Ruttencutter, Lemuel Jarrott	Mason	Special Prep.
Sanders, John Augustus	Oceana	2nd Year Prep.
Savage, Fred Cameron	Charleston	4th Year Prep.
Schenerlein, Barnard Wallace	Wheeling.	2nd Year Prep.
Scott, William Emmett	Maxwelton	S. S. (Grad. A. and S.)
Scott Alice	McMechen	Summer School
Scott George Dolliver	Fairmont	S. S. Methods
Scott, Lorena Bernice	Bruceton Mills	Music
Scott, Lucy	Dunbar	Summer School
Scott, Mary Ingram	Moundsville	S. S. Methods
Semans, Georgia Anna	Morgantown	Commercial
Sesler, James Thomas	Newcomer, Pa.	2nd Year Prep.
Shafer, Carlton Marma	Morgantown	3rd Year Prep.
Shelby, Minerva	Morgantown	2nd Year Prep
Shields, Virginia	Frankford	Summer School
Shock, Iva Virginia	Burnsville	Special
Schockey, Virginia	Winchester	Summer School
Shriver, Herma Susanna	Sistersville	S. S. (Fr. A. B.)
Shriver, Herschel Leasure	Star City	2nd Year Prep.
Shriver, Mary Susanna	Sistersville	Summer School
Sigler, Landon James	Sutton	Special Prep.
Simmons, Hattie Ann	Churchville	Summer School
Simmons, Lois Florence	Morgantown	Music
Simpson, Bertha Weirich	Wellsburg	Summer School
Simpson, Julia Ellen	Morgantown	Summer School
Simpson, Livia Nye	Pt. Pleasant	2nd Year Prep.
Six, Maud Edna	St. Cloud	Music
Smith, Beulah	McMechen	Summer School
Smith, Daisy	Hundred	Summer School
Smith, Florence Anna	Morgantown	Music
Smith, Ethel Gay	Morgantown	Music
Snider, Clifford Raymond	Spencer	3rd Year Prep.
Snider, Charles Alphra	Grafton	S. S. Methods
Snodgrass, Otis Rimer	Pullman	Summer School
Snyder, Rena Jane	Morgantown	2nd Year Prep.
South, Lulu Lenore	Bald Hill, Pa.	Commercial
Speare, Wilma Carrie	West Liberty	S. S. (Fr. A. B.)
Spencer, Effie Beatrice	Parkersburg	Summer School
Spencer, Ida Isadore	Parkersburg	Summer School
Springer, Adah Florence	Flemington	Summer School
Staats, Georgie Lu	Evans	S. S. (Soph. A. B.)
Stalnaker, Bonnie Odell	Flatwoods	Summer School
Stalnaker, Elva Rhea	Flatwoods	Summer School
Stark, Okey	Belleville	Summer School
Stealey, Elizabeth	Clarksburg	Summer School
Stealey, John B.	Clarksburg	1st Year Prep.
Steele, Mary Pearl	Morgantown	Summer School
Stemple, Minnie Frances	Morgantown	Summer School
Stemple, Isabel Katherine	Amboy	Summer School
Stewart, John Lawrence	Morgantown	4th Year Prep.
Stewart, Nellie	Philippi	Summer School
Stewart, Archie	Wilbur	Summer School
Stillwagon, Mabel Katherine	Connellsville, Pa.	Summer School
Stoetzer, Herman Gregory	Fairmont	S. S Methods

Stone, Helen Louise	Morgantown	Special Prep.
Strickler, Willie Almond	Ellenboro	S. S. Methods
Stulder, Laura	Charles Town	S. S. Methods
Strouch, Allan George	Moundsville	1st Year Prep.
Swearingen, Harry Levi Van	Uniontown	S. S. Methods
Swisher, Scott Neil	Morgantown	Commercial
Swisher, Silas Newton	Morgantown	S .S. Methods
Sykes, Lulu Mae	New Martinsville	Summer School
Talbert, Arthur Raymond	Martinsburg	4th Year Prep.
Thearton, Romaine	Morgantown	3rd Year Prep.
Thomas, Charles Herbert	Godfrey	1st Year Prep.
Thomas, Janet Anna	Morgantown	Commercial
Thompson, James	Morgantown	2nd Year Prep.
Timmons, Ella Daisy	Triadelphia	Summer School
Torrance, Fannie Moff	Morgantown	Summer School
Tracewell, Helen Gertrude	Parkersburg	Summer School
Tracy, Nannie	Wheeling	Summer School
Traver, Allie	Clarksburg	Music.
Treat, Helen Loveland	Morgantown	Music
Trent, William Woodson	Runa	S. S. (Sen. A. B.)
Turner, Ella May	Shepherdstown	S. S. (Grad. A. and S.
Utt, Sue	Morgantown	Commercial
Vlahos, Harris John	Morgantown	1st Year Prep.
Van Horn, Orpha	Salem	Summer School
Wade, Charles Anson	Burnsville	Summer School
Wade, Harriett	Morgantown	S .S. Methods
Wade, Horace Alexander	Mt. Morris, Pa.	3rd Year Prep.
Wade, Zoe Florence	Fairmont	S. S. Methods
Wade, Sallie Shields	Morgantown	Commercial
Walker, Clifton Clark	Morgantown	S. S. (Grad. A. and S.)
Wallace, Anna McNeel	Mill Point	Summer School
Walters, Mary Elizabeth	Masontown	Music
Walton, Lief Elmer	Modoc	2nd Year Prep.
Wambaugh, Olive	Morgantown	Music
Wamsley, Lena	Parsons	Summer School
Ward, Mary Elizabeth	Fairmont	Summer School
Ware, Maria Gordon	Huntington	Summer School
Waters, Ruby Belle	Morgantown	Art
Waters, Martha	Morgantown	Commercial
Watkins, Karl Nixon	Brown	Summer School
Watson, Odar Arlington	Fairmont	Summer School
Way, Floe Marguerite	Parkersburg	Summer School
Weaver, Mabel Jane	Morgantown	Music
Weaver, Noel Price	Morgantown	Commercial
Webb, Homer	Big Bend	Commercial
Welch, Leila Frayne	Cairo	Summer School
Wells, Jack Charles	Bluefield	Commercial
Weltner, Nellie Jeannette	Morgantown	Music
West, John Thomas	Morgantown	S. S. (Grad. A. and S.)
Westfall, Daisy	Harrisville	Summer School
Wharton, Willie Ruffland	Elm Grove	S. S. Methods
White, Wilson Henry Stout	Cowen	Jun. A. B.
White, Mary Gertrude	Morgantown	Dom. Sc. and Music
White, Florence Helen	Grafton	Summer School
White, Frank S.	Morgantown	Summer School

'hite, Lulu Norma	Organ Cave	Summer School
'hitham, Rachel Elizabeth	Morgantown	S. S. Methods
ilcox, Lyda Zeonia	Parkersburg	Summer School
ilkinson, Alice Irwin	Wheeling	S. S. Methods
ilkinson, Emma Eugenie	Wheeling	S. S. Methods
illiams, Price Wayne	Moundsville	3rd Year Prep.
illiams, Frances Flora	Grafton	Music
illis, Lewis Preston	Calivo, Capiz Prov., P. I.	Summer School
ilson, Sallie Wilberta	Monterey, Va.	Summer School
innette, Ethel Moss	Cameron	Summer School
inter, Albert Spencer	Moundsville	Summer School
inter, Bessie Pearl	Morgantown	Commercial
inter, Elsie Lee	Morgantown	Commercial
olf, Lena	Morgantown	Music
olfe, Maude Myrtle	Mt. Clare	Summer School
oodburn, Ethel Gertrude	Moundsville	Summer School
oodford, Bessie	Morgantown	Art
right, Helen Rachel	Charleston	Music
arger, Hazel Estella	Morgantown	Commercial
oke, French Arlington	Morgantown	Commercial
oung, Sara Adaline	Wade	Summer School
immerman, Carrie	McMechen	Summer School

IRREGULAR STUDENTS IN THE SCHOOLS

Students whose names appear in the following list are taking work in some School of the University, but they are not regularly registered and, for reasons satisfactory in each case, are doing less than the regular amount of work.

Ames, Jane Laura	Morgantown	Physical Training
Anderson, Florence Elizabeth	Morgantown	Physical Training
Ashton, John James	Morgantown	Music
Babb, Lula	Morgantown	Choral Society
Babb, Edna	Morgantown	Choral Society
Bailey, Helen Maud	Fairmont	Music
Baker, Marguerite	Morgantown	Music
Baldwin, Mabel Carolina	Ft. Erie, Ontario	Music
Bayles, Glenda Letitia	Morgantown	Physical Training
Bloom, Mildred Fonstine	Morgantown	Physical Training
Boehler, Louise Anna	Morgantown	Music
Boggs, Caroline Anne	Morgantown	Music
Boughton, Esther Marie	Morgantown	Physical Training
Brown, Elizabeth	Morgantown	Physical Training
Burdette, Ethel	Morgantown	Art
Burnett, Cassandra Courtney	Warren, Ohio	Music
Buseman, Pearl Priscilla	Morgantown	Physical Training
Christy, Mary Louise	Morgantown	Physical Training
Clarke, Nancy Dorothy	Morgantown	Physical Training
Clarke, Jeannette	Morgantown	Physical Training
Clarke, Addison Armstrong	Morgantown	Music
Cobun, Helen Josephine	Morgantown	Physical Training
Conn, Elenor	Pt. Marion, Pa.	Music
Courtney, Catherine	Morgantown	Music.
Courtney, Frances Lee	Morgantown	Music
Courtney, Grace Olive	Morgantown	Art.
Courtney, Wilma Marie	Morgantown	Music
Cox, Nan Leigh	Fairmont	Music
Cox, Margaret Elizabeth	Morgantown	Music
Cramer, Elizabeth Irene	Morgantown	Music
Creel, George Raymond	Morgantown	Choral Society
Dalinsky, Bessie	Morgantown	Music
Davies, Philip	Morgantown	Music
Davis, Eleanor Josephine	Morgantown	Music
Dawson, Anna Lola	Morgantown	Music
DeMoss, Bertha Lee	Morgantown	Music
DeMoss, Frederick Eugene	Morgantown	Music
Donley, Nelle Gertrude	Fairmont	Music
Dressler, Mary Gray	Morgantown	Music & Physical Training
Edmondson, Gladys Chastaine	Morgantown	Physical Training
Edmondson, Helen Louise	Morgantown	Physical Training

Ellis, Zoe Olive	Morgantown	Physical Training
Evans, Edith Elizabeth	Morgantown	Physical Training
Evans, Elizabeth May	Morgantown	Music and Physical Training
Evans, David Henry	Morgantown	Choral Society
Evans, Phyllis Miriam	Morgantown	Music
Fast, Elizabeth Josephine	Morgantown	Music
Field, Mary Lillian	Morgantown	Physical Training
Field, Helen Preston	Morgantown	Music
Fife, Frances Elizabeth	Morgantown	Physical Training
Finberg, Beatrice	Morgantown	Physical Training
Finberg, Leonore Dorothy	Morgantown	Physical Training
Fisher, Leona	Morgantown	Physical Training
Fitch, Jessie Johnson	Morgantown	Choral Society
Fleming, Pauline	Morgantown	Physical Training
Fleming, Ruth	Morgantown	Physical Training
Foglesong, Katherine	Morgantown	Music
Friend, Mary Mildred	Morgantown	Physical Training
Fry, Mildred Elsie	Morgantown	Physical Training
Frye, Gwendolyn Estelle	Morgantown	Physical Training
Garrison, Lillian Knight	Morgantown	Music
Genin, Olgo Desire	Morgantown	Music
Gilmore, Virginia	Morgantown	Music
Glenn, Mary Jane	Morgantown	Music
Glenn, Kate Rachel	Morgantown	Music
Glover, Julia Virginia	Morgantown	Music
Gneiser, Emma Ida	Morgantown	Physical Training
Gneiser, Hattie Violet	Morgantown	Music
Gorman, Annie Pelley	Morgantown	Choral Society
Gregg, John Morton	Morgantown	Music
Gregg, John Morton, Sr.	Morgantown	Choral Society
Hagans, Louise Hamilton	Morgantown	Choral Society
Hall, Ella Leila	Morgantown	Physical Training
Hall, Golda Elizabeth	Morgantown	Art
Hanford, Josephine	Morgantown	Music
Hardesty, Ocie Sadie	Mannington	Music
Hardy, Mary Josephine	Winterport, Maine	Music
Hayes, Lizzie Gertrude	Morgantown	Choral Society
Heenan, Sarita Florice	Morgantown	Music & Phys. Training
Herod, Audra Evelyn	Dunkard, Pa.	Music
Hough, Ethel Rebecca	Morgantown	Music
Houghton, Ruth Margaret	Morgantown	Physical Training
Hutchins, Eleanor Elizabeth	Morgantown	Art
Jacobs, Virginia	Morgantown	Art
Jenifer, Elizabeth Margaret	Morgantown	Music
Jones, David Thomas	Morgantown	Choral Society
Jones, Margaret	Morgantown	Music
Jones, Margaret Elsie	Morgantown	Music
Jones, Margaret Helen	Morgantown	Physical Training
Jones, Trevor Morris	Morgantown	Music
Kelley, Lulu Genevieve	Morgantown	Music
Kitzmiller, Norma Patterson	Clarksburg	Music
Lazzell, Meta	Morgantown	
Lazzell, Cecelia Mabel	Morgantown	Physical Training
Leadley, Rosa	Groveland Station, N. Y.	Art

Lewis, Stella May	Morgantown	Physical Training
Lough, Harriet Belle	Fairmont	Music
Lough, Maude Musgrave	Morgantown	Music
Loyd, Elizabeth Dillie	Morgantown	Music
Mackey, Elizabeth Anna	Morgantown	Physical Training
Madeira, Irene Elizabeth	Morgantown	Choral Society
Madera, Dorcas	Morgantown	Physical Training
Madera, Emil Earl Herbert	Morgantown	Music
Martin, Martha Ray	Morgantown	Choral Society
Marvin, Alfreda Rosella	Morgantown	Physical Training
Marvin, Louis Harold	Morgantown	Music
Mathers, Anna May	Morgantown	Physical Training
Mattson, Ellen	Morgantown	Music
McNeill, Genevieve	Morgantown	Music
Miller, Harry Irving	Morgantown	Music
Miller, Virginia Baker	Morgantown	Music & Phy. Training
Miller, Lois Evalyn	Morgantown	Music
Miller, Roy Brooks	Morgantown	Music
Miller, Vivian	Morgantown	Music
Moore, Lydia Lucile	Van Voorhis	Music
Moreland, James Rogers	Morgantown	Choral Society
Moreland, Ethel Finnicum	Morgantown	Choral Society
Morgan, Mary Ellen	Buckhannon	Music
Morgan, Emily Josephine	Morgantown	Physical Training
Pastorius, Viola May	Morgantown	Physical Training
Pollock, Rebecca Luella	Waynesburg, Pa.	Music
Powell, Martha Virginia	Morgantown	Physical Training
Price, Mildred Louise	Morgantown	Music
Price, Otella Beatrice	Morgantown	Art
Richards, Florence	Morgantown	Physical Training
Ridgeway, Frances Marie	Morgantown	Physical Training
Ridgeway, Nellie Louise	Morgantown	Physical Training
Roberts, David John	Morgantown	Choral Society
Robbins, Ruth	Morgantown	Music
Rogers, Mary Washington	Morgantown	Music
Ross, Flora Blanche	Dunkard, Pa.	Music
Ross, May Darling	Morgantown	Art
Sankbiel, Willie Frank	Morgantown	Music
Scott, Bessie Catherine	Morgantown	Music
Selby, Mildred Virginia	Morgantown	Music
Shriver, Allie Pauline	Morgantown	Music
Shuttlesworth, Lucy Adeline	Morgantown	Music
Sigwart, Alice Sophie	Morgantown	Physical Training
Sigwart, Bertha	Morgantown	Physical Training
Sims, Mabel	Morgantown	Physical Training
Sisler, Millard Telford	Morgantown	Choral Society
Smith, Regina Constance	Morgantown	Music
Smith, Emma Iona	Morgantown	Music
Snyder, Jennie May	Morgantown	Music
Steele, Sara Gertrude	Morgantown	Physical Training
Stewart, Mary	Morgantown	Physical Training
Stewart, Mattie Ann	Morgantown	Choral Society
Stockton, Frances Louise	Hampton, Mass.	Choral Society
Straight, Willa Ethyl	Fairmont	Music
Tarr, Helen Elizabeth	Morgantown	Music

ennant, Hattie Luella	Morgantown	Music
homas, Elsie May	Morgantown	Physical Training
homas, Evelyn Victoria	Morgantown	Physical Training
homas, Oliven Mary	Morgantown	Physical Training
rotter, Martha Elizabeth	Morgantown	Physical Training
rotter, Lorentz Steele	Morgantown	Music
uckwiller, Eugene Anthony	Morgantown	Music
uckwiller, Rachel	Morgantown	Music
an Moor, Avis	Morgantown	Physical Training
oight, Margaretta	Morgantown	Music
Vade, Georgia Chorpenning	Morgantown	Music
Vatson, George Clarence	Morgantown	Music
Veaver, James Plummer	Morgantown	Choral Society
Vhetsell, Mabel Elenor	Morgantown	Music
Vilbourn, Clara Maud	Morgantown	Music
Villiams, Thomas Bevan	Morgantown	Choral Society
Villiams, Sarah Elvira	Morgantown	Physical Training
Villiams, Anna Jane	Morgantown	Music
Villiams, Gladys	Morgantown	Music
Villiams, Harriet	Morgantown	Music
illiams, Mary Margaret	Morgantown	Music
Villis, Martha Jane	Morgantown	Music
ingrove, Alleene	Morgantown	Physical Training
Volf, Gertrude	Morgantown	Music
Volf, Marie	Morgantown	Music
ost, Ellis Asby	Morgantown	Choral Society
inn, Nellie Virginia		Music

THE UNIVERSITY SCHOOLS—SUMMARY OF ENROLLMENT, 1909-1910

(As Reported May 1, 1910)

Students regularly enrolled in:	Male	Female	Total
The School of Fine Arts	..	6	6
The School of Music	3	60	63
‡The Commercial School	21	27	48
*The Summer School	89	213	302
†The School of Sunday School Methods	24	23	47
The Preparatory School	109	24	133
Total	246	353	599
Irregular Students in			
Music	14	80	94
Choral Society	10	11	21
Art	..	9	9
Physical Training	..	57	57
Total	24	157	181
Entire enrollment (deducting names repeated)	270	510	780

*The total enrollment in the Summer School including those re-enrolled later in some other college or school of the University was 426.

†The total enrollment in the School of Sunday School Methods including those re-enrolled in some other college or school was 176.

‡Students enrolled this year in the Commercial School will hereafter be counted in the Department of Commerce in the College of Arts and Sciences or in the Preparatory School.

ENROLLMENT BY STATES

West Virginia	735
Pennsylvania	31
Maryland	1
Virginia	1
Ohio	3
Indiana	2
New York	1
Maine	1
Arkansas	1
Illinois	1
Massachusetts	1
Philippine Islands	1
Canada	1
Total	780

SUMMARY OF STUDENTS IN WEST VIRGINIA UNIVERSITY, 1909-10.

	Male	Female	Total
Regularly enrolled in the colleges	377	90	467
Irregular and short course students in the colleges	30	19	49
Enrolled in extension schools	124	2	126
Regularly enrolled in the schools	246	353	599
Irregularly enrolled in the schools	24	157	181
Grand Total	801	621	1422

SUMMARY OF UNIVERSITY FACULTY, 1909-1910.

Professor Emeritus	1
Professors	38
Associate Professors	5
Assistant Professors	4
Instructors	16
Assistants	7
Library Staff	5
Experiment Station Staff	15
Total	91

INDEX---Part I.

Absence, credit for work done in, 122
Accredited preparatory schools, 32
Admission, 34
Admission, requirements for:
  College of Agriculture, 159
  College of Arts and Sciences, 55
  College of Engineering, 121
  College of Law, 180
  College of Medicine, 191, 194
  Military Department, 206
Admission to the bar, 182
Advanced standing, 36
Agency, 184
Agricultural extension work, 164
Agriculture, 42, 64, 165
  Certificate course in, 162
  College of, 157
  Diploma course in, 162
  Short courses in, 163
  Special winter course in, 163
Aid for students, 51
Alumni associations, 215
Anatomy and physiology, 64, 197
Animal husbandry, 64, 167
Astronomy, 101
Armory, 203
Arts and Sciences, College of, 53
Athletics, 30
Bacteriology, 66, 168, 199
Bar examinations, 182
Band, 205
Boarding and rooming places, 31, 51
Botany, 64, 168
Bryan prize, 50
Buildings, 24, 27, 114
Cadet appointments, 206
Cadet band, 205
Cadet corps, 202
Cadet graduates, 207
Cadet roster, 208
Calendar, 4
Chapel exercises, 47
Chemistry, 66, 168, 197
Christian associations, 47
Civil engineering, 70, 123, 138
Classification of students, 44
Class officer, 43
Classics, English, 38
Commencement speakers, 214
Commerce:
  Course in, 62
  Diploma course in, 62
  Preparatory work in, 63
  Department of, 70
Common law, 187
Constitutional law, 186
Convocation speakers, 214
Corporations, 186
Course, definition of, 43, 56
Courses, maximum number of, 43
Courses required for degrees, 56
Court practice, 188
Criminal law, 185
Dairying, 168
Degrees:
  In the College of Arts and Sciences, 56
  In the College of Agriculture, 159
  In the College of Engineering, 120
  In the College of Law, 181
  In the College of Medicine, 191, 193
  Conferred in 1909, 210
Departments of Instruction:
  College of Arts and Sciences, 64
  College of Agriculture, 165
  College of Engineering, 138
  College of Law, 183
  College of Medicine, 196
Diagnosis, physical, 200
Diplomas:
  In agriculture, 162
Discipline, 46
Doctor of Philosophy, 61
Domestic Science, 75, 164, 170
Drawing, 42, 85
Economics and sociology, 74
Education, 75
Elective studies, 58
Electrical engineering, 126, 148
Elocution, 82

Embryology, 198
Engineering and Mechanic Arts, College of, 113
Engineering:
  Graduate courses in, 120, 136
  Special courses in 120, 136
  Undergraduate courses in, 120, 123, 126, 132
Engineering Society, 119
English, 37, 78
English language and literature, 79
Enrollment:
  Summary of, 232
  By states, 233
Entomology, 84, 169
Entrance credits, 35
Entrance requirements, 37
Equipment:
  In the College of Agriculture, 158
  In the College of Engineering, 114
  In the College of Medicine, 190
Equity, 186
Evidence, 185
Experimental engineering, 150
Expenses, 30, 31
Faculty:
  College of Agriculture, 157
  College of Arts and Sciences, 53
  College of Engineering, 113
  College of Law, 179
  College of Medicine, 190
  University, 9
  Number in, 233
Fees, 30, 196
Fine Arts, 85
Forestry, 85, 172
Foundation of University, 20
French, 39, 106
Funds, 27
General information, 46
Geology and mineralogy, 86
German, 39, 87
Government of the University, 22
Greek, 39, 89
Growth of the University, 24
Gymnasium, 29
Histology, 173, 200
Historical sketch, 20
History, 40, 92
Horticulture, 98, 173
Hygiene and inspection, 175
Instruction, methods of, 118, 190
Insurance, 184
Inter-Society prize, 49
Italian, 110
Laboratories, 28
Latin, 39, 98
Law, 100
Law, College of, 179
Law, Courses in, 180
Law library, 179
Library, 27
Library staff, 18
Location of the University, 26
Machine design, 144
Major study, 57
Manual Training courses, 137
Master of Arts, 59
Master of Laws, 182
Master of Science, 61
Mathematics, 41, 100
Mathematics, applied, 101, 151
Matriculation, 35
Meat inspection, 175
Mechanic arts, 141, 174
Mechanical drawing and machine design, 144
Mechanical engineering, 101, 126, 141
Mechanics and applied mathematics, 101, 151
Medical courses, 191, 193
Medical jurisprudence, 174, 200
Medicine, College of, 190
Milk inspection, 175
Military science and tactics, Department of, 202
Military science, Course in, 63, 204
Mineralogy, 86
Mining engineering, 132, 153
Minor studies, 57
Morris prize in engineering, 50
Music, 102
Officers of the University, 7
Organization of the University, 26
Pathology, 173, 200
Pharmacology, 200
Philosophy, 102
Physical training, 29, 103, 204
Physics, 104, 175
Physicians, Special courses for, 196
Physicians and Surgeons, The Baltimore College of, 193
Physiology, 64, 199
Political science, 97
Practical work, Facilities for, 118
Prizes, 48, 213
Psychology, 102
Real property, 183
Recognized preparatory schools, 34
Regents' prizes, 49

Regents, The Board of, 6
Registration, 35
Rhetoric, 37, 78
Romance languages and literature, 106
Rules concerning admission, etc., 34
Schedules of studies:
A.B. Course, 58
B.S. Course, 58
B.S. Com. Course, 58
B.S.C.E. Course, 125
B.S.M.E. Course, 130
B.S.E.M. Course, 134
Law, 181
B.S. and M.D. Course, 192
Four-Year Medical Course, 195
Veterinary Course, 160
Diploma Course in Agriculture, 162
Scholarship, 44
Science, 41
Societies, 48
Sociology, 75
Spanish, 109
Special students, 35, 121
Standing committees, 8
Steam engineering, 146
Students, List of, 216
Studies, Groups of, 56
Tax Commission prize, 50
Teachers' Bureau, 52
Text-books, 189, 201
Theses, 46, 123
Thompson Company prize, The Edward, 50
Thompson prize in Anatomy, 49
Torts, 185
Tuition, Rates of, 30
University Council, 7
Veterinary science, 160, 175
Woman's Hall, 50
Woman's Medical College, 194
Work done in absence. Credit for, 122
Y. W. C. A. Self-help Committee, 51
Zoology, 111

INDEX---Part II.

Accounting, 61
Administration and instruction, officers of, 7
Admission requirements, 16, 28.
Agriculture, 41
Agricultural Experiment Station, 64
    Station staff, 13, 64
Board of Regents, 6
Board of Control, 6
Botany, 40, 53
Buildings, 14
Calendar, 4, 5
Certificates in music, Teachers' 16.
Chapter houses, 30
Chemistry, 43, 53
Choral society, 15
Chorus singing, 20
Clay modeling, 46
Civics, 58
Committees, 8
Concerts and recitals, 15
Conference, Educational, 31
Control, Board of, 6
Convocation, Summer school, 31
Council, University, 7
Courses of study:
    Art, 23, 24
    Music, 16
    Summer school, schedule of, 31
Departments of instruction:
    Preparatory school, 53
    School of fine arts, 24
    School of music, 18
    Summer school, 34
Diplomas:
    Awarded in 1909, 66
    In fine arts, 24
    In music, 16
Domestic arts and sciences, 47
Drawing, 24, 46
Education, 34
Educational conference, 31
English, 37, 54
Enrollment, summary of, 84.
Ensemble playing, 20
Equipment:
    School of fine arts, 23
    School of music, 14
Experiment Station, 13, 64
Faculty:
    Of the university schools, 9
    Preparatory school, 51
    School of fine arts, 23
    School of music, 14
    Summer school, 26
    Sunday school methods, 28
Fine Arts:
    School of, 23
    College credit for courses in, 24
    Courses of instruction in, 24, 48
French, 44, 55
Geography, Physical, 60
German, 45, 56
Graduation requirements:
    School of Music, 16
Greek, 57
History, 39, 58
Household economics, 47
Laboratories, 32
Languages, modern, 21
Latin, 44, 59
Library:
    Use of in summer school, 29
Library science, 49
Mathematics, 45, 60
Matin service, 29
Music:
    College credit for courses in, 16
    History of, 20
    Theory of, 20
    School of, 14, 47
Nature study, 40
Observation work, 36
Painting, 25, 46
Physical geography, 60
Physical training, 61
Physics, 42, 60, 61
Physiology, 61
Piano, 17, 18
Pipe organ, 20
Preparatory school, 51

Primary work and methods, 36
Prizes, 52, 67
Public school drawing, 45
Recitals, 15, 29, 48
Regents, Board of, 6
Requirements for admission:
    Preparatory school, 52
    School of music, 16
    Summer School, 31
Schedule of courses in summer school, 31
Spanish, 55
Statistical table, 84
Stenography, 62
Students, list of, 68
Summer school, 26
Sunday school methods, 50
Tuition rates:
    Preparatory school, 52
    School of fine arts, 23
    School of music, 21, 48
    Summer school, 29
Typewriting, 63
University council, 7
Violin, 17, 19
Voice, 17, 18
Woman's hall, 30
Wood and brass instruments, 20

9
1909-1911